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Service Manual

ORDER NO.
ARP3492

FLAT SCREEN TV

PDP-LX5090H

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-LX5090H	YSIXK5	AC 220 V to 240 V	
PDP-LX5090H	WYS5	AC 220 V to 240 V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PDP-LX5090	ARP3480	EXPLODED VIEWS, BLOCK DIAGRAM, ADJUSTMENT, etc.

For SPECIFICATIONS and PANEL FACILITIES, refer to the operating instructions.

The electrical configurations of the PDP-LX5090H are the same as those of the PDP-LX5090, except for those for part of the MTB block (mainly the MAIN Assy).
As for mechanical configurations, most of the components are common between these two models, except for those for the MTB block and printing, as well as connectors.

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   7.19 MAIN ASSY (19/24) [ARIA_0 BLOCK]....110
   7.20 MAIN ASSY (20/24) [ARIA_1 BLOCK]....112
   7.21 MAIN ASSY (21/24) [ARIA_MEMORY BLOCK]....114
   7.22 MAIN ASSY (22/24) [IF_UCOM BLOCK]....116
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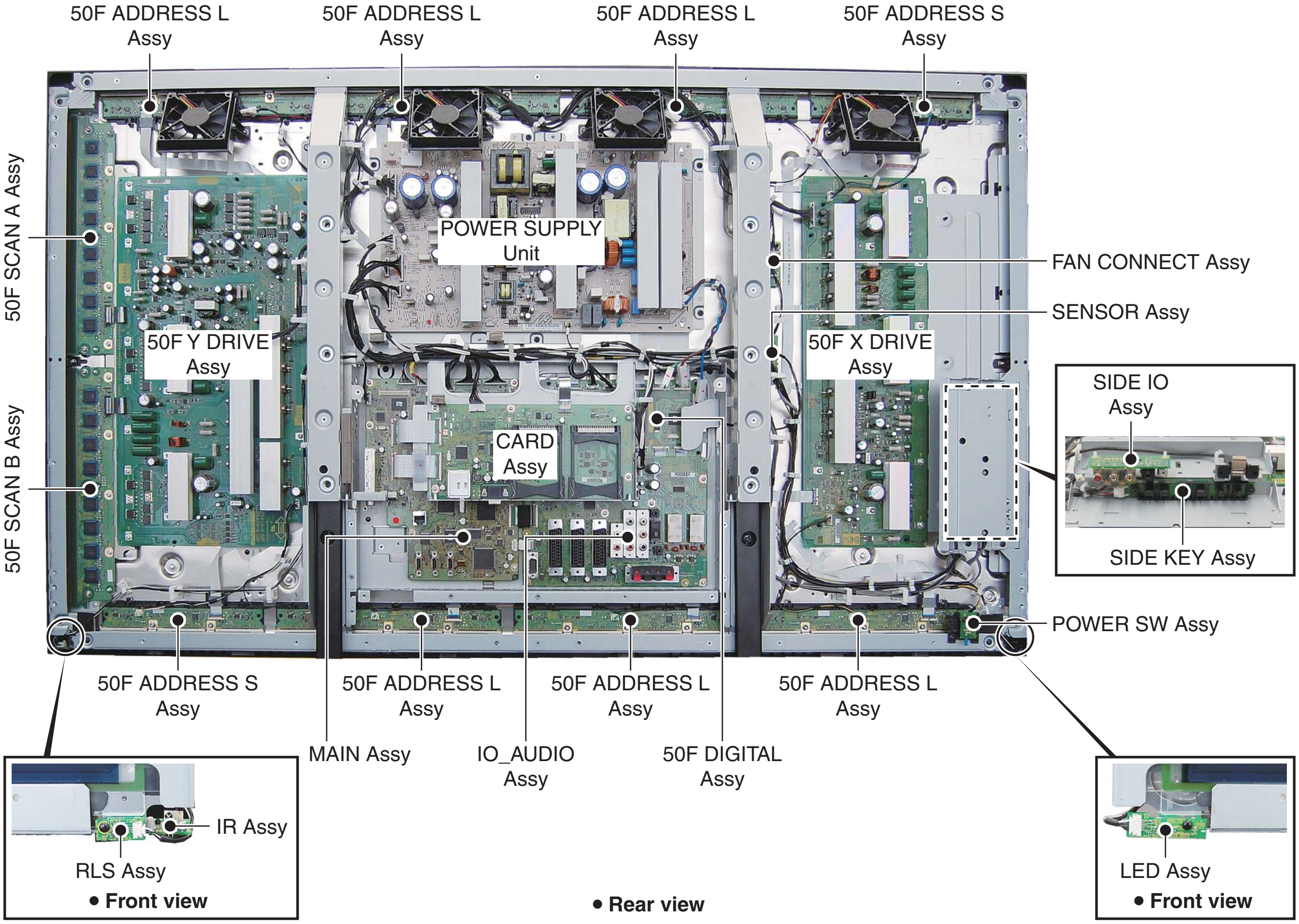
1. BASIC ITEMS FOR SERVICE

1.1 PCB LOCATIONS

Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype. Upon servicing, be sure to restore the original wiring of the unit after repair work.


50F ADDRESS L Assy
50F ADDRESS L Assy
50F ADDRESS L Assy
50F ADDRESS S Assy
50F SCAN A Assy
50F SCAN B Assy
POWER SUPPLY Unit
50F Y DRIVE Assy
50F X DRIVE Assy
FAN CONNECT Assy
SENSOR Assy
CARD Assy
SIDE IO Assy
SIDE KEY Assy
POWER SW Assy
50F ADDRESS S Assy
50F ADDRESS L Assy
50F ADDRESS L Assy
50F ADDRESS L Assy
MAIN Assy
IO_AUDIO Assy
50F DIGITAL Assy
IR Assy
RLS Assy
● Front view
● Rear view
LED Assy
● Front view

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP		50F ADDRESS L ASSY	AWW1348
NSP		50F ADDRESS S ASSY	AWW1349
NSP		50F SCAN A ASSY	AWW1350
		└ IC2801 - IC2808	AN16184A
NSP		50F SCAN B ASSY	AWW1351
		└ IC2901 - IC2908	AN16184A
		SENSOR ASSY	AWW1340
		50F DIGITAL Assy	AWW1347
		50F X DRIVE ASSY	AWV2546
		50F Y DRIVE ASSY	AWV2547
⚠		* MAIN ASSY	AWV2556
		IO_AUDIO ASSY	AWW1354
		SIDE IO ASSY	AWW1358
		SIDE KEY ASSY	AWW1361
		LED ASSY	AWW1362
		IR ASSY	AWW1363
		FAN CONNECT ASSY	AWW1364
		RLS ASSY	AWW1365
		POWER SW ASSY	AWW1366
		* CARD ASSY	AWV2558
⚠		POWER SUPPLY UNIT	AXY1200
		PDP SERVICE ASSY 509FE	AWU1342

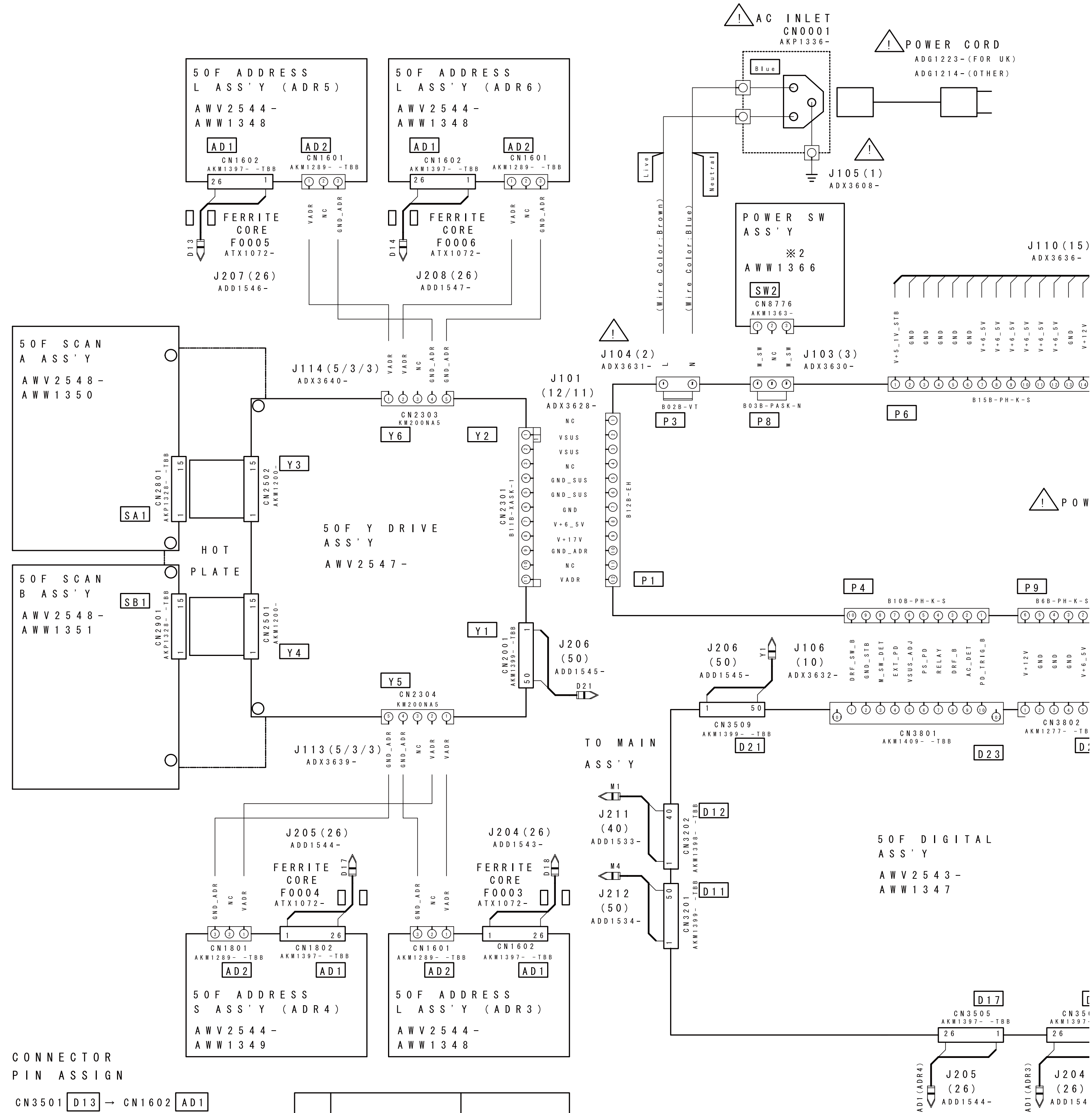
* These Assys are for PDP-LX5090H model use.

1.2 JIGS LIST

Name	Jig No.	Remarks
Flexible cable for service	GGP1048	refer to “4.2 DISASSEMBLY 4 Sub Multi Chassis”

2. BLOCK DIAGRAM

2.1 OVERALL WIRING DIAGRAM (1/2)


AC INLET
CN0001
AKP1336-
Blue
POWER CORD
ADG1223-(FOR UK)
ADG1214-(OTHER)
Live
Neutral
J105(1)
ADX3608-
(Wire Color:Brown)
(Wire Color:Blue)
POWER SW ASS'Y
※2
AWW1366
SW2
CN8776
AKM1363-
50F ADDRESS L ASS'Y (ADR5)
AWV2544-
AWW1348
50F ADDRESS L ASS'Y (ADR6)
AWV2544-
AWW1348
AD1
AD2
CN1602
AKM1397- -TBB
CN1601
AKM1289- -TBB
VADR
NC
GND_ADR
D13
D14
FERRITE CORE
F0005
F0006
ATX1072-
J207(26)
ADD1546-
J208(26)
ADD1547-
50F SCAN A ASS'Y
AWV2548-
AWW1350
SA1
CN2801
AKP1328- -TBB
HOT PLATE
50F SCAN B ASS'Y
AWV2548-
AWW1351
SB1
CN2901
AKP1328- -TBB
J114(5/3/3)
ADX3640-
CN2303
KM200NA5
Y6
Y2
Y3
CN2502
AKM1200-
CN2501
Y4
50F Y DRIVE ASS'Y
AWV2547-
CN2301
B11B-XASK-1
NC
VSUS
VSUS
NC
GND_SUS
GND_SUS
GND
V+6_5V
V+17V
GND_ADR
NC
VADR
J101
(12/11)
ADX3628-
B12B-EH
P1
J104(2)
ADX3631-
L
N
B02B-VT
P3
M_SW
NC
M_SW
J103(3)
ADX3630-
B03B-PASK-N
P8
J110(15)
ADX3636-
V+5_1V_STB
GND
GND
GND
GND
V+6_5V
V+6_5V
V+6_5V
V+6_5V
V+6_5V
GND
V+12V
B15B-PH-K-S
P6
POW
Y1
CN2001
AKM1399- -TBB
J206
(50)
ADD1545-
D21
Y5
CN2304
KM200NA5
J113(5/3/3)
ADX3639-
P4
B10B-PH-K-S
P9
B6B-PH-K-S
J206
(50)
ADD1545-
J106
(10)
ADX3632-
DRF_SW_B
GND_STB
M_SW_DET
EXT_PD
VSUS_ADJ
PS_PD
RELAY
DRF_B
AC_DET
PD_TRIG_B
V+12V
GND
GND
GND
V+6_5V
CN3509
AKM1399- -TBB
CN3801
AKM1409- -TBB
D23
CN3802
AKM1277- -TB
TO MAIN ASS'Y
M1
J211
(40)
ADD1533-
CN3202
AKM1398- -TBB
D12
M4
J212
(50)
ADD1534-
CN3201
AKM1399- -TBB
D11
50F DIGITAL ASS'Y
AWV2543-
AWW1347
J205(26)
ADD1544-
J204(26)
ADD1543-
D17
D18
FERRITE CORE
F0004
F0003
ATX1072-
CN1801
AKM1289- -TBB
CN1802
AKM1397- -TBB
CN1601
CN1602
50F ADDRESS S ASS'Y (ADR4)
AWV2544-
AWW1349
50F ADDRESS L ASS'Y (ADR3)
AWV2544-
AWW1348
D17
CN3505
AKM1397- -TBB
J205
(26)
ADD1544-
J204
(26)
AD1(ADR4)
AD1(ADR3)

CONNECTOR
PIN ASSIGN

CN3501 D13 → CN1602 AD1
CN3502 D14 → CN1602 AD1
CN3503 D15 → CN1602 AD1
CN3504 D16 → CN1802 AD1
CN3505 D17 → CN1802 AD1
CN3506 D18 → CN1602 AD1
CN3507 D19 → CN1602 AD1
CN3508 D20 → CN1602 AD1

```
 1→26. V+10V    14→13. CLKN
 2→25. V+10V    15→12. CLKP
 3→24. GND      16→11. GND
 4→23. GND      17→10. DN
 5→22. AN       18→ 9. DP
 6→21. AP       19→ 8. GND
 7→20. GND      20→ 7. GND
 8→19. BN       21→ 6. V+3_3V
 9→18. BP       22→ 5. V+3_3V
10→17. GND      23→ 4. V+3_3V
11→16. CN       24→ 3. GND
12→15. CP       25→ 2. LS1
13→14. GND      26→ 1. ADR_PD
```

※2	PDP-LX5090H	AWV2552-

CN2501 Y4
↓
CN2901 SB1

```
 1. VH
 2. VH
 3. NC
 4. NC
 5. GNDH_VH
 6. GNDH_VH
 7. SI
 8. GNDH_DIG
 9. CLK_L
10. LE
11. OC1
12. OC2
13. CLR
14. GNDH_RL
15. IC5V
```

CN2502 Y3
↓
CN2801 SA1

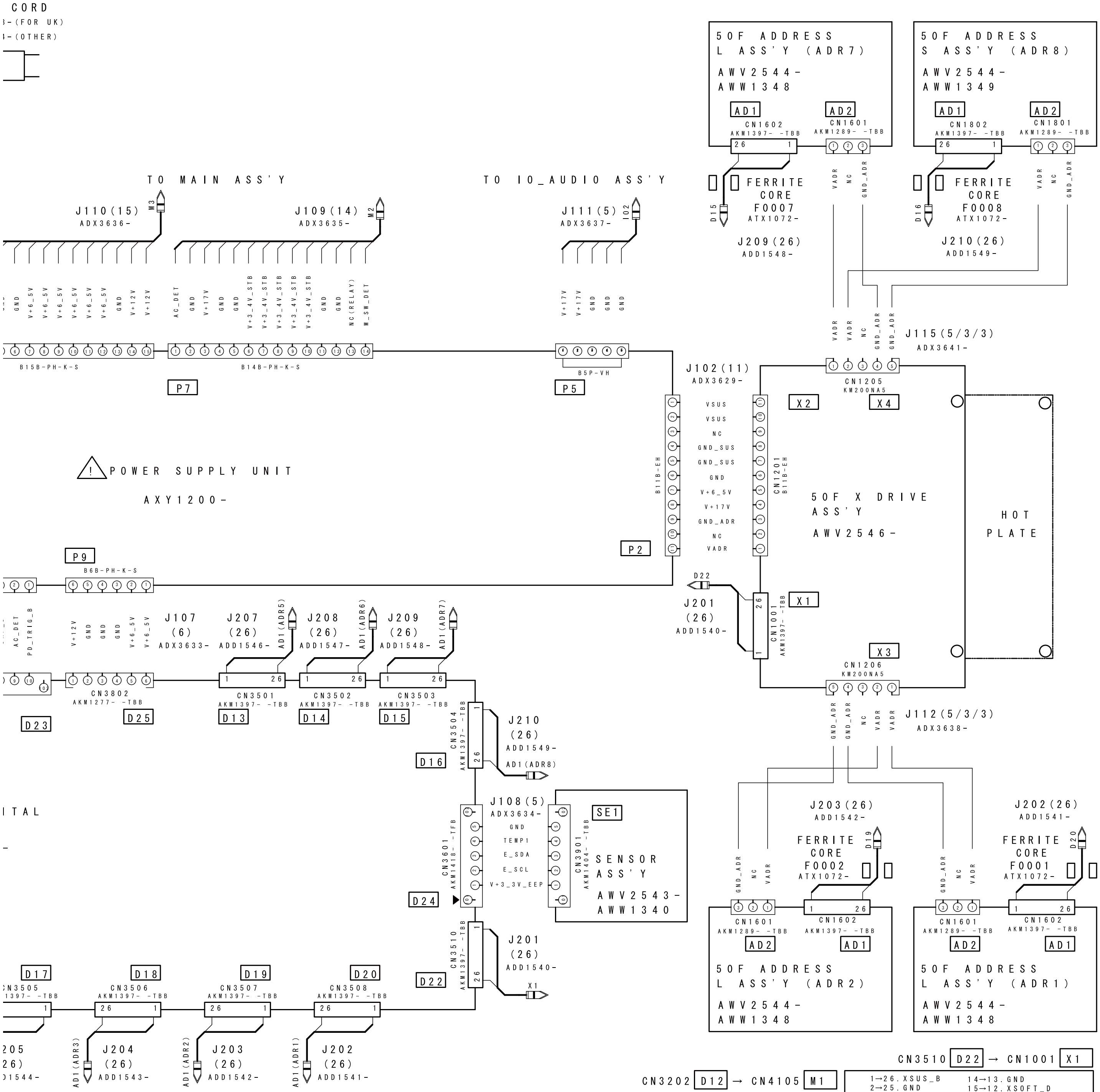
```
 1. VH
 2. VH
 3. NC
 4. NC
 5. GNDH_VH
 6. GNDH_VH
 7. CLK_H
 8. GNDH_DIG
 9. LE
10. OC1
11. OC2
12. CLR
13. SI
14. GNDH_RH
15. IC5V
```

CN3509 D21 → CN2001 Y1

```
 1→50. YCN_PD         18→33. SUS_MUTE     35→16. YRSV4
 2→49. VYPRST_ADJ     19→32. YSNOFS       36→15. SI
 3→48. SCAN_PD        20→31. GND          37→14. CLK_H
 4→47. GND            21→30. YRST-D       38→13. GND
 5→46. YDD_PD         22→29. YSUS_LMSK    39→12. LE
 6→45. VOFS_ADJ       23→28. YSUS_HMSK    40→11. OC1
 7→44. YSUS_PD        24→27. GND          41→10. OC2
 8→43. GND            25→26. YSUS_D       42→ 9. CLR
 9→42. YRSV1          26→25. YPR-U        43→ 8. GND
10→41. YRSV2          27→24. YSUS_G       44→ 7. VKNOFS4_ADJ
11→40. GND            28→23. GND          45→ 6. VKNOFS3_ADJ
12→39. YKNOFS4        29→22. YSUS_U       46→ 5. VKNOFS1_2_ADJ
13→38. YKNOFS3        30→21. YRSV3        47→ 4. GND
14→37. YKNOFS2        31→20. YSUS_B       48→ 3. SCN5V_PD
15→36. YKNOFS1        32→19. ESW          49→ 2. YDRV_PD(GND)
16→35. GND            33→18. GND          50→ 1. PSW2
17→34. YSOFT-G        34→17. CLK_L
```

CN3201 D11 → CN4101 M4

```
 1→50. V+3_4V_ACT2    18→33. R8_EVN    35→16. G
 2→49. NC             19→32. R7_EVN    36→15. G
 3→48. GND            20→31. R6_EVN    37→14. G
 4→47. MULTI_OE       21→30. R5_EVN    38→13. G
 5→46. RELAY2         22→29. R4_EVN    39→12. B
 6→45. REQ_MD         23→28. R3_EVN    40→11. B
 7→44. RXD_MD         24→27. R2_EVN    41→10. B
 8→43. TXD_MD         25→26. R1_EVN    42→ 9. B
 9→42. GND            26→25. R0_EVN    43→ 8. B
10→41. THEATER        27→24. GND       44→ 7. B
11→40. VD             28→23. G9_EVN    45→ 6. B
12→39. HD             29→22. G8_EVN    46→ 5. B
13→38. DE             30→21. G7_EVN    47→ 4. B
14→37. GND            31→20. G6_EVN    48→ 3. B
15→36. CLK            32→19. G5_EVN    49→ 2. G
16→35. GND            33→18. G4_EVN    50→ 1. M
17→34. R9_EVN         34→17. G3_EVN
```


CORD
-(FOR UK)
-(OTHER)
TO MAIN ASS'Y
TO IO_AUDIO ASS'Y
J110(15)
ADX3636-
M3
J109(14)
ADX3635-
M2
J111(5)
ADX3637-
IO2
GND
V+6_5V
V+6_5V
V+6_5V
V+6_5V
V+6_5V
GND
V+12V
V+12V
AC_DET
GND
V+17V
GND
GND
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
GND
GND
NC(RELAY)
M_SW_DET
V+17V
V+17V
GND
GND
GND
B15B-PH-K-S
B14B-PH-K-S
B5P-VH
P7
P5
POWER SUPPLY UNIT
AXY1200-
P9
B6B-PH-K-S
P2
B11B-EH
J102(11)
ADX3629-
VSUS
VSUS
NC
GND_SUS
GND_SUS
GND
V+6_5V
V+17V
GND_ADR
NC
VADR
CN1201
B11B-EH
X2
X4
50F X DRIVE
ASS'Y
AWV2546-
HOT
PLATE
J115(5/3/3)
ADX3641-
VADR
VADR
NC
GND_ADR
GND_ADR
CN1205
KM200NA5
D22
J201
(26)
ADD1540-
CN1001
AKM1397- -TBB
X1
X3
CN1206
KM200NA5
GND_ADR
GND_ADR
NC
VADR
VADR
J112(5/3/3)
ADX3638-
50F ADDRESS
L ASS'Y (ADR7)
AWV2544-
AWW1348
AD1
AD2
CN1602
AKM1397- -TBB
CN1601
AKM1289- -TBB
FERRITE
CORE
F0007
ATX1072-
D15
J209(26)
ADD1548-
50F ADDRESS
S ASS'Y (ADR8)
AWV2544-
AWW1349
CN1802
AKM1397- -TBB
CN1801
AKM1289- -TBB
FERRITE
CORE
F0008
ATX1072-
D16
J210(26)
ADD1549-
AC_DET
PD_TRIG_B
V+12V
GND
GND
GND
V+6_5V
V+6_5V
J107
(6)
ADX3633-
J207
(26)
ADD1546-
AD1(ADR5)
J208
(26)
ADD1547-
AD1(ADR6)
J209
(26)
ADD1548-
AD1(ADR7)
CN3802
AKM1277- -TBB
CN3501
AKM1397- -TBB
CN3502
AKM1397- -TBB
CN3503
AKM1397- -TBB
D23
D25
D13
D14
D15
CN3504
AKM1397- -TBB
D16
J210
(26)
ADD1549-
AD1(ADR8)
ITAL
J108(5)
ADX3634-
GND
TEMP1
E_SDA
E_SCL
V+3_3V_EEP
CN3601
AKM1418- -TFB
CN3901
AKM1404- -TBB
SE1
SENSOR
ASS'Y
AWV2543-
AWW1340
D24
CN3510
AKM1397- -TBB
J201
(26)
ADD1540-
X1
D22
D17
D18
D19
D20
CN3505
1397- -TBB
CN3506
AKM1397- -TBB
CN3507
AKM1397- -TBB
CN3508
AKM1397- -TBB
205
26)
1544-
AD1(ADR3)
J204
(26)
ADD1543-
AD1(ADR2)
J203
(26)
ADD1542-
AD1(ADR1)
J202
(26)
ADD1541-
J203(26)
ADD1542-
FERRITE
CORE
F0002
ATX1072-
D19
GND_ADR
NC
VADR
CN1601
AKM1289- -TBB
CN1602
AKM1397- -TBB
AD2
AD1
50F ADDRESS
L ASS'Y (ADR2)
AWV2544-
AWW1348
J202(26)
ADD1541-
FERRITE
CORE
F0001
ATX1072-
D20
50F ADDRESS
L ASS'Y (ADR1)
AWV2544-
AWW1348

CN3202 D12 → CN4105 M1

1→40. MODE_B
2→39. SQ_SEL
3→38. GND
4→37. GND
5→36. R9_ODD
6→35. R8_ODD
7→34. R7_ODD
8→33. R6_ODD
9→32. R5_ODD
10→31. R4_ODD
11→30. R3_ODD
12→29. R2_ODD
13→28. R1_ODD
14→27. R0_ODD
15→26. GND
16→25. G9_ODD
17→24. G8_ODD
18→23. G7_ODD
19→22. G6_ODD
20→21. G5_ODD
21→20. G4_ODD
22→19. G3_ODD
23→18. G2_ODD
24→17. G1_ODD
25→16. G0_ODD
26→15. GND
27→14. B9_ODD
28→13. B8_ODD
29→12. B7_ODD
30→11. B6_ODD
31→10. B5_ODD
32→ 9. B4_ODD
33→ 8. B3_ODD
34→ 7. B2_ODD
35→ 6. B1_ODD
36→ 5. B0_ODD
37→ 4. GND
38→ 3. GND
39→ 2. GND
40→ 1. MODE_C

CN3510 D22 → CN1001 X1

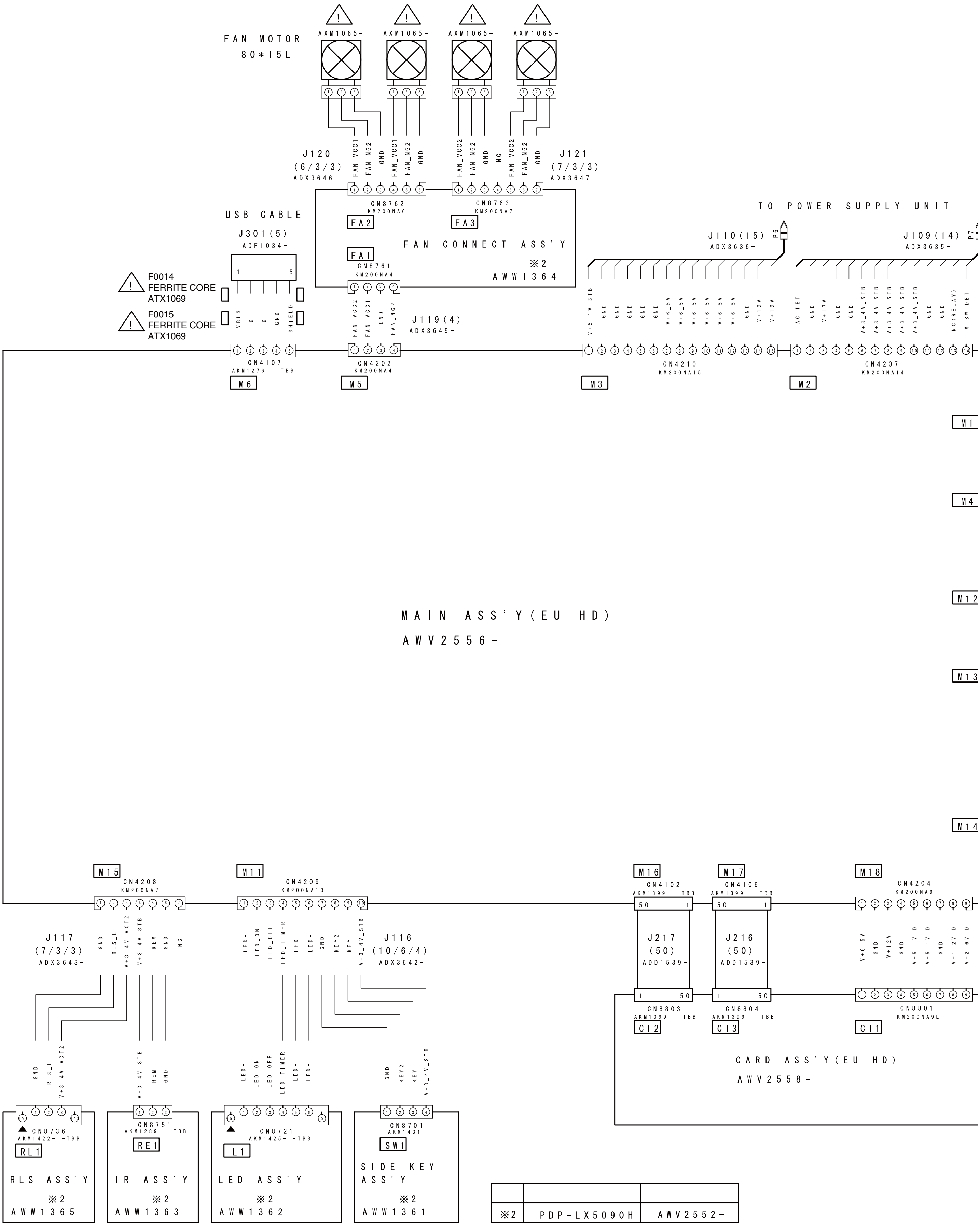
1→26. XSUS_B
2→25. GND
3→24. XSUS_U
4→23. GND
5→22. XSUS_D
6→21. GND
7→20. XSUS_G
8→19. GND
9→18. XPRST
10→17. GND
11→16. XKOFS1
12→15. GND
13→14. XKOFS2
14→13. GND
15→12. XSOFT_D
16→11. GND
17→10. SUS_MUTE
18→ 9. GND
19→ 8. XKOFS1_ADJ
20→ 7. XKOFS2_ADJ
21→ 6. GND
22→ 5. XDD_PD
23→ 4. PSW2
24→ 3. XRSV1
25→ 2. Psize
26→ 1. XSUS_PD

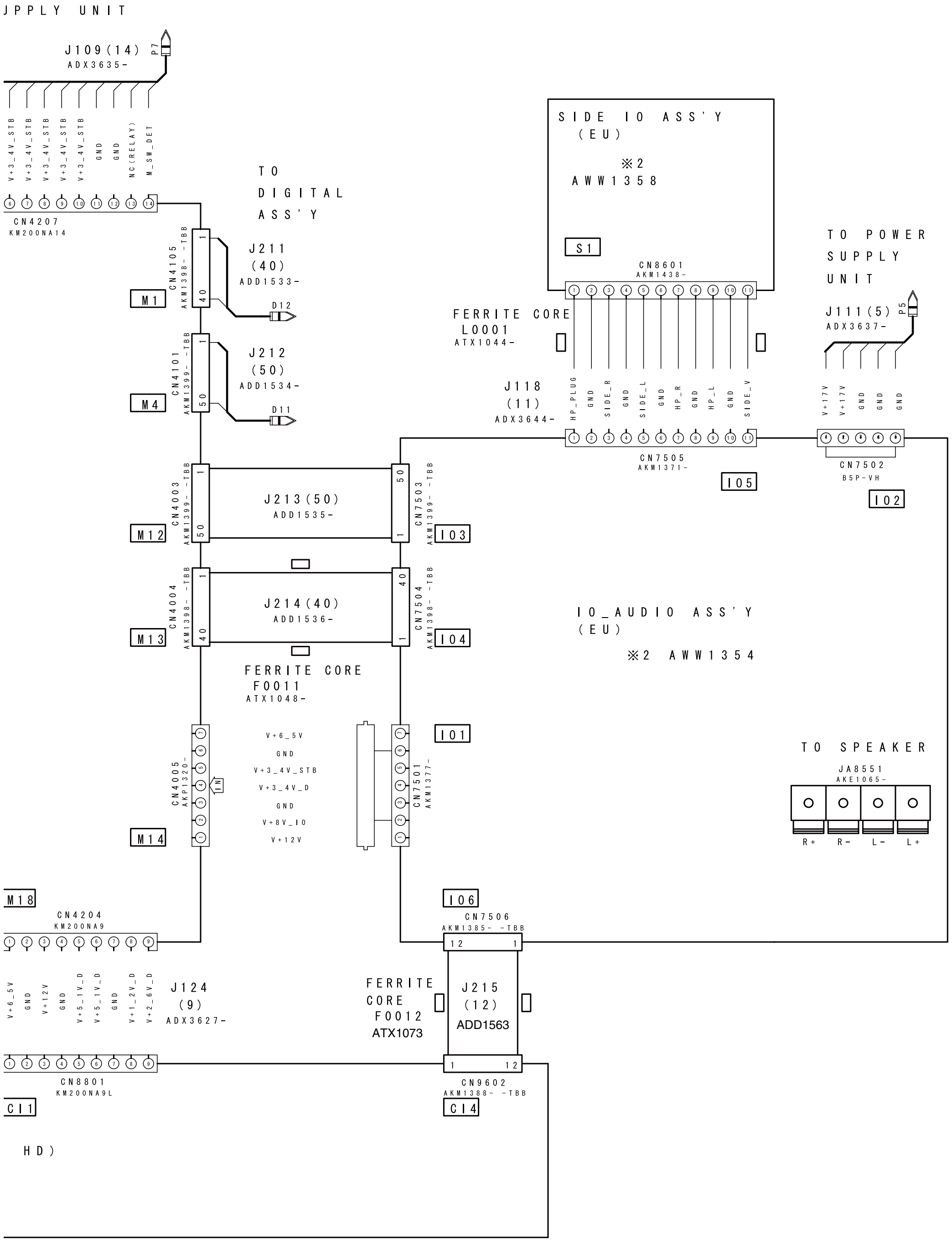
M4

8→33. R8_EVN
9→32. R7_EVN
0→31. R6_EVN
1→30. R5_EVN
2→29. R4_EVN
3→28. R3_EVN
4→27. R2_EVN
5→26. R1_EVN
6→25. R0_EVN
7→24. GND
8→23. G9_EVN
9→22. G8_EVN
0→21. G7_EVN
1→20. G6_EVN
2→19. G5_EVN
3→18. G4_EVN
4→17. G3_EVN
35→16. G2_EVN
36→15. G1_EVN
37→14. G0_EVN
38→13. GND
39→12. B9_EVN
40→11. B8_EVN
41→10. B7_EVN
42→ 9. B6_EVN
43→ 8. B5_EVN
44→ 7. B4_EVN
45→ 6. B3_EVN
46→ 5. B2_EVN
47→ 4. B1_EVN
48→ 3. B0_EVN
49→ 2. GND
50→ 1. MODE_A

- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

2.2 OVERALL WIRING DIAGRAM (2/2)


FAN MOTOR
80*15L
AXM1065-
AXM1065-
AXM1065-
AXM1065-
J120
(6/3/3)
ADX3646-
FAN_VCC1
FAN_NG2
GND
FAN_VCC1
FAN_NG2
GND
FAN_VCC2
FAN_NG2
GND
NC
FAN_VCC2
FAN_NG2
GND
J121
(7/3/3)
ADX3647-
CN8762
KM200NA6
CN8763
KM200NA7
FA2
FA3
FA1
CN8761
KM200NA4
FAN CONNECT ASS'Y
※2
AWW1364
USB CABLE
J301(5)
ADF1034-
F0014
FERRITE CORE
ATX1069
F0015
FERRITE CORE
ATX1069
VBUS
D-
D+
GND
SHIELD
FAN_VCC2
FAN_VCC1
GND
FAN_NG2
J119(4)
ADX3645-
CN4107
AKM1276- -TBB
M6
CN4202
KM200NA4
M5
TO POWER SUPPLY UNIT
J110(15)
ADX3636-
P6
J109(14)
ADX3635-
P7
V+5_1V_STB
GND
GND
GND
GND
GND
V+6_5V
V+6_5V
V+6_5V
V+6_5V
V+6_5V
V+6_5V
GND
V+12V
V+12V
AC_DET
GND
V+17V
GND
GND
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
GND
GND
NC(RELAY)
M_SW_DET
CN4210
KM200NA15
M3
CN4207
KM200NA14
M2
M1
M4
MAIN ASS'Y(EU HD)
AWV2556-
M12
M13
M14
M15
CN4208
KM200NA7
M11
CN4209
KM200NA10
M16
CN4102
AKM1399- -TBB
M17
CN4106
AKM1399- -TBB
M18
CN4204
KM200NA9
J117
(7/3/3)
ADX3643-
GND
RLS_L
V+3_4V_ACT2
V+3_4V_STB
REM
GND
NC
LED-
LED_ON
LED_OFF
LED_TIMER
LED-
LED-
GND
KEY2
KEY1
V+3_4V_STB
J116
(10/6/4)
ADX3642-
J217
(50)
ADD1539-
J216
(50)
ADD1539-
V+6_5V
GND
V+12V
GND
V+5_1V_D
V+5_1V_D
GND
V+1_2V_D
V+2_6V_D
CN8803
AKM1399- -TBB
CI2
CN8804
AKM1399- -TBB
CI3
CN8801
KM200NA9L
CI1
CARD ASS'Y(EU HD)
AWV2558-
GND
RLS_L
V+3_4V_ACT2
V+3_4V_STB
REM
GND
LED-
LED_ON
LED_OFF
LED_TIMER
LED-
LED-
GND
KEY2
KEY1
V+3_4V_STB
CN8736
AKM1422- -TBB
RL1
RLS ASS'Y
※2
AWW1365
CN8751
AKM1289- -TBB
RE1
IR ASS'Y
※2
AWW1363
CN8721
AKM1425- -TBB
L1
LED ASS'Y
※2
AWW1362
CN8701
AKM1431-
SW1
SIDE KEY
ASS'Y
※2
AWW1361
※2
PDP-LX5090H
AWV2552-


JPPLY UNIT
J109(14)
ADX3635-
P7
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
GND
GND
NC(RELAY)
M_SW_DET
CN4207
KM200NA14
TO DIGITAL ASS'Y
CN4105
AKM1398- -TBB
J211
(40)
ADD1533-
D12
M1
CN4101
AKM1399- -TBB
J212
(50)
ADD1534-
D11
M4
SIDE IO ASS'Y
(EU)
※2
AWW1358
S1
CN8601
AKM1438-
FERRITE CORE
L0001
ATX1044-
J118
(11)
ADX3644-
HP_PLUG
GND
SIDE_R
GND
SIDE_L
GND
HP_R
GND
HP_L
GND
SIDE_V
CN7505
AKM1371-
I05
TO POWER SUPPLY UNIT
J111(5)
ADX3637-
P5
V+17V
V+17V
GND
GND
GND
CN7502
B5P-VH
I02
CN4003
AKM1399- -TBB
J213(50)
ADD1535-
CN7503
AKM1399- -TBB
M12
I03
CN4004
AKM1398- -TBB
J214(40)
ADD1536-
CN7504
AKM1398- -TBB
M13
I04
IO_AUDIO ASS'Y
(EU)
※2 AWW1354
FERRITE CORE
F0011
ATX1048-
CN4005
AKP1320-
IN
V+6_5V
GND
V+3_4V_STB
V+3_4V_D
GND
V+8V_IO
V+12V
CN7501
AKM1377-
I01
M14
TO SPEAKER
JA8551
AKE1065-
R+
R-
L-
L+
M18
CN4204
KM200NA9
V+6_5V
GND
V+12V
GND
V+5_1V_D
V+5_1V_D
GND
V+1_2V_D
V+2_6V_D
J124
(9)
ADX3627-
I06
CN7506
AKM1385- -TBB
FERRITE CORE
F0012
ATX1073
J215
(12)
ADD1563
CN9602
AKM1388- -TBB
CI4
CN8801
KM200NA9L
CI1
HD)

CONNECTOR PIN ASSIGN

CN4003 M12 → CN7503 I03

1→50.GND
2→49.HP_PLUG
3→48.WP_EDID
4→47.DSUB_DET
5→46.AC_HP_MUTE
6→45.GND
7→44.SDA_AV
8→43.SCL_AV
9→42.GND
10→41.AC_A_MUTE
11→40.RST_MSP
12→39.OTW
13→38.A_NG_B
14→37.GND
15→36.I2S_BCLK_DTV
16→35.GND
17→34.I2S_LRCLK_DTV
18→33.I2S_SDATA_DTV
19→32.GND
20→31.GND
21→30.GND
22→29.SPDIF_HDMI
23→28.GND
24→27.GND
25→26.SPDIF_DTV
26→25.GND
27→24.EMMA_DA_GY
28→23.EMMA_DA_BCB
29→22.EMMA_DA_RCR
30→21.GND
31→20.EXT_HD
32→19.EXT_VD
33→18.INT_VD
34→17.INT_HD
35→16.CLP_RGB1
36→15.CLP_RGB2
37→14.GND
38→13.SDA_AV5
39→12.SCL_AV5
40→11.GND
41→10.SR_OUT
42→ 9.TXD_SR
43→ 8.RXD_SR
44→ 7.GND
45→ 6.TXD_232C_1
46→ 5.RXD_232C_1
47→ 4.NC(232C_EN_B)
48→ 3.232C_DET
49→ 2.RST4
50→ 1.GND(IO_DET)

CN4004 M13 → CN7504 I04

1→40.GND
2→39.RCR_AD
3→38.GND
4→37.BCB_AD
5→36.GND
6→35.GY_AD
7→34.GND
8→33.RCR_VDEC
9→32.GND
10→31.BCB_VDEC
11→30.GND
12→29.GY_VDEC
13→28.GND
14→27.FB_VDEC
15→26.GND
16→25.VBI_Y
17→24.GND
18→23.MAIN_C
19→22.GND
20→21.MAIN_Y
21→20.GND
22→19.SUB_C
23→18.GND
24→17.SUB_Y
25→16.GND
26→15.A_TUNER_V
27→14.GND
28→13.DT_MON_CVBS
29→12.GND
30→11.AIR_SIF
31→10.GND
32→ 9.AC_AM_MUTE
33→ 8.TEMP2
34→ 7.AC_SC1_MUTE
35→ 6.LIMK_IO2
36→ 5.AC_SC2_MUTE
37→ 4.LIMK_IO3
38→ 3.AC_SC3_MUTE
39→ 2.IR_OUT
40→ 1.GND

CN4106 M17 → CN8804 CI3

1→50.CARD_DET1
2→49.GND
3→48.I2C_CI_SDA
4→47.I2C_CI_SCL
5→46.GND
6→45.CI_IRQ_N
7→44.CI_RW_N
8→43.CI_RD_N
9→42.CI_ACK_N
10→41.CI_CS_N
11→40.CI_RST
12→39.GND
13→38.CI_MCLK
14→37.GND
15→36.GND
16→35.TSO_DATA0
17→34.TSO_DATA1
18→33.TSO_DATA2
19→32.TSO_DATA3
20→31.TSO_DATA4
21→30.TSO_DATA5
22→29.TSO_DATA6
23→28.TSO_DATA7
24→27.TSO_VALID
25→26.TSO_SYNC
26→25.GND
27→24.TSO_CLK
28→23.GND
29→22.TSI_DATA0
30→21.TSI_DATA1
31→20.TSI_DATA2
32→19.TSI_DATA3
33→18.TSI_DATA4
34→17.TSI_DATA5
35→16.TSI_DATA6
36→15.TSI_DATA7
37→14.TSI_VALID
38→13.TSI_SYNC
39→12.GND
40→11.TSI_CLK
41→10.GND
42→ 9.FE_TS_SEL
43→ 8.EMG_DDC
44→ 7.DD_RST
45→ 6.FE2_RST
46→ 5.FE2_INT
47→ 4.GND
48→ 3.I2C2_SDA
49→ 2.I2S2_SCL
50→ 1.GND

CN4102 M16 → CN8803 CI2

1→50.GND
2→49.SPDIF_DTV_CI
3→48.GND
4→47.ADSP_RST
5→46.ADSP_INT
6→45.DIR_RST
7→44.DIR_INT_N
8→43.SPI_SS0B
9→42.SPI_SS1B
10→41.SPI_SCK
11→40.SPI_MOSI
12→39.SPI_MISO
13→38.GND
14→37.CI_B_EN
15→36.CI_B_FAULT_B
16→35.CI_A_EN
17→34.CI_A_FAULT_B
18→33.GND
19→32.CI_D[0]
20→31.CI_D[1]
21→30.CI_D[2]
22→29.CI_D[3]
23→28.GND
24→27.CI_D[4]
25→26.CI_D[5]
26→25.CI_D[6]
27→24.CI_D[7]
28→23.GND
29→22.CI_A[0]
30→21.CI_A[1]
31→20.CI_A[2]
32→19.CI_A[3]
33→18.CI_A[4]
34→17.CI_A[5]
35→16.CI_A[6]
36→15.CI_A[7]
37→14.GND
38→13.CI_A[8]
39→12.CI_A[9]
40→11.CI_A[10]
41→10.CI_A[11]
42→ 9.CI_A[12]
43→ 8.CI_A[13]
44→ 7.CI_A[14]
45→ 6.CI_A[15]
46→ 5.GND
47→ 4.CI_A_VS1
48→ 3.CI_B_VS1
49→ 2.GND
50→ 1.CARD_DET2

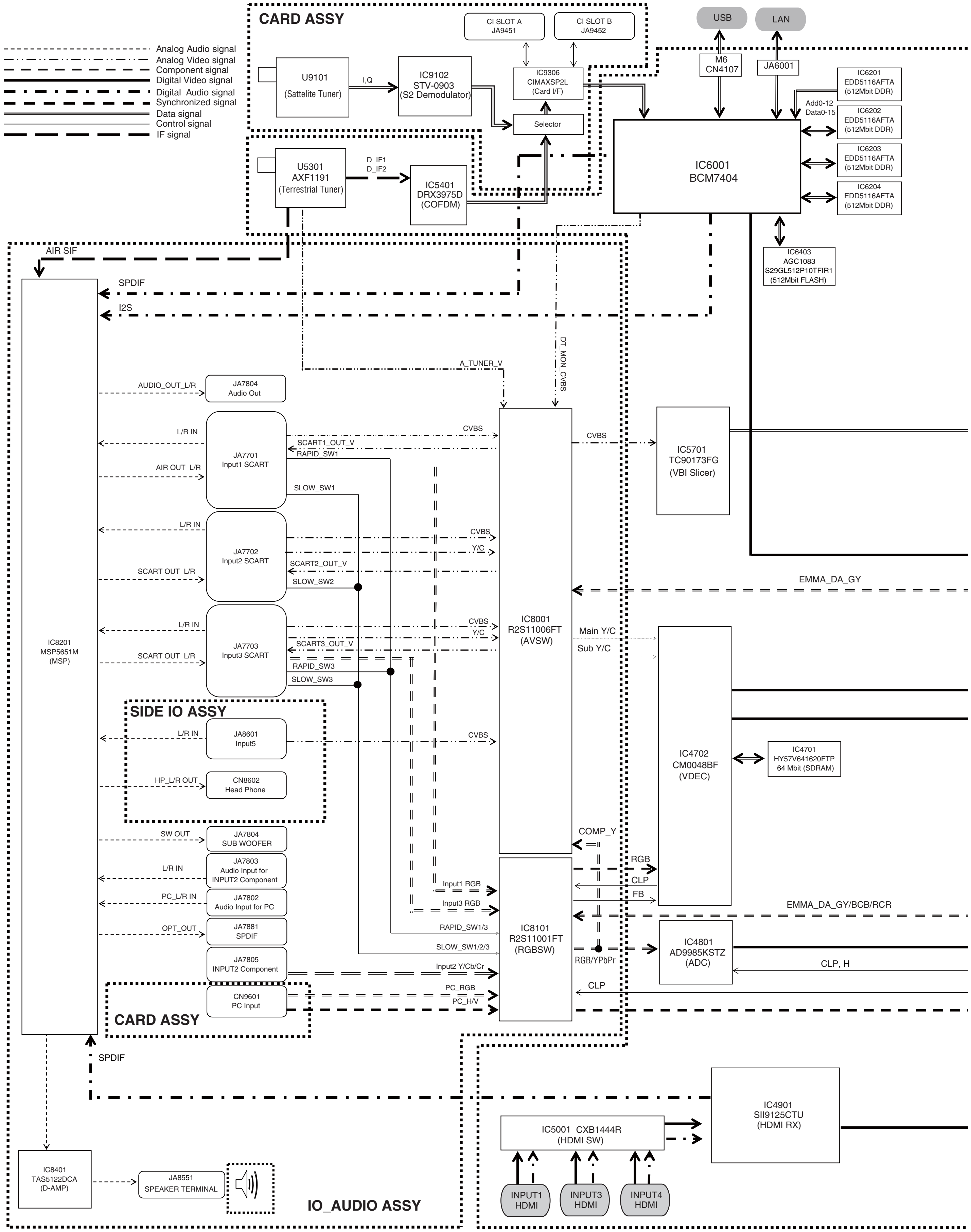
CN7506 I06 → CN9602 CI4

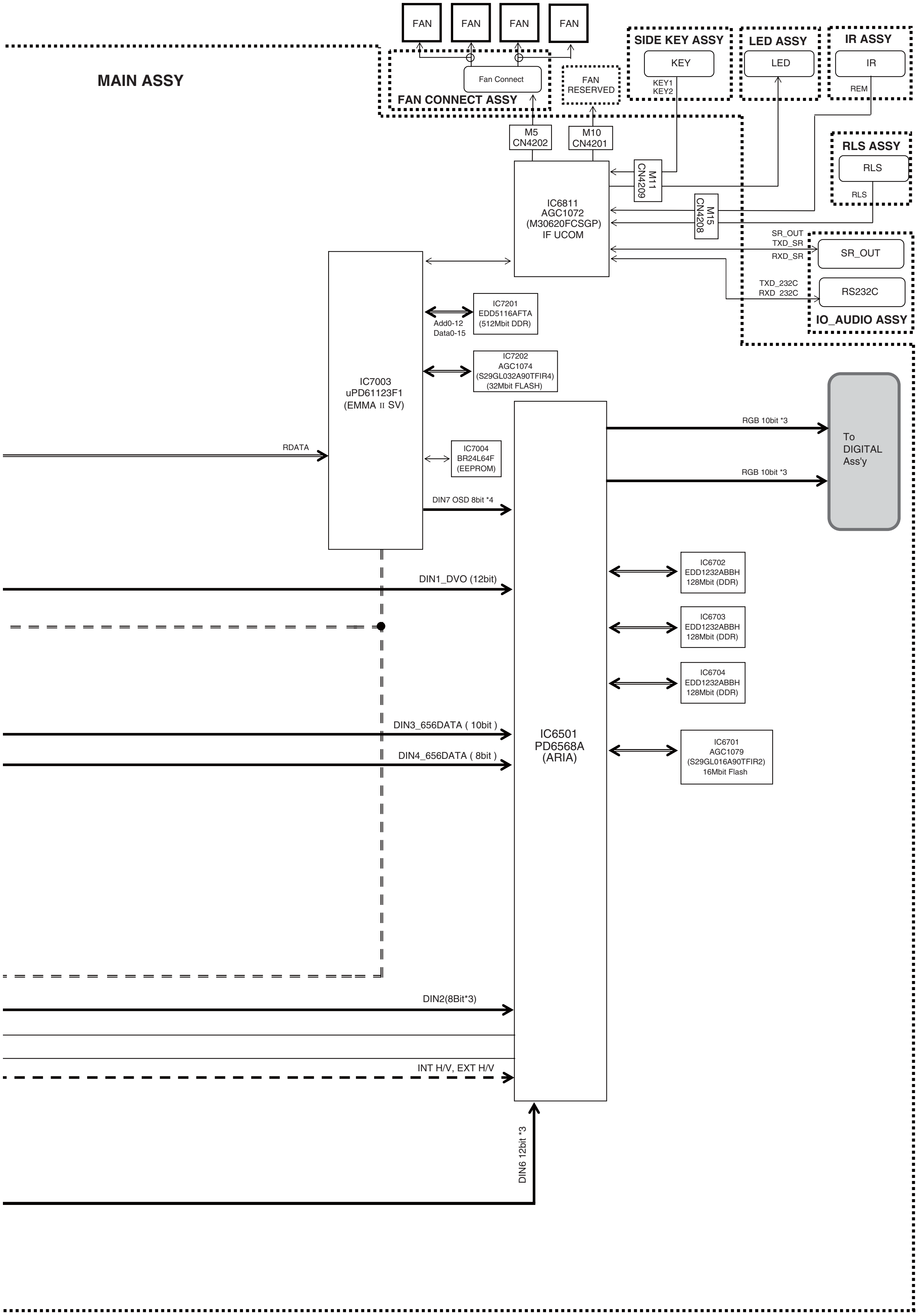
1→12.V+3_4V_STB
2→11.PC_HD
3→10.PC_VD
4→ 9.GND
5→ 8.PC_R
6→ 7.GND
7→ 6.PC_B
8→ 5.GND
9→ 4.PC_G
10→ 3.WP_EDID
11→ 2.V+5V_IO
12→ 1.SPDIF_ADSP

CN7506 I06 → CN8801 PC1

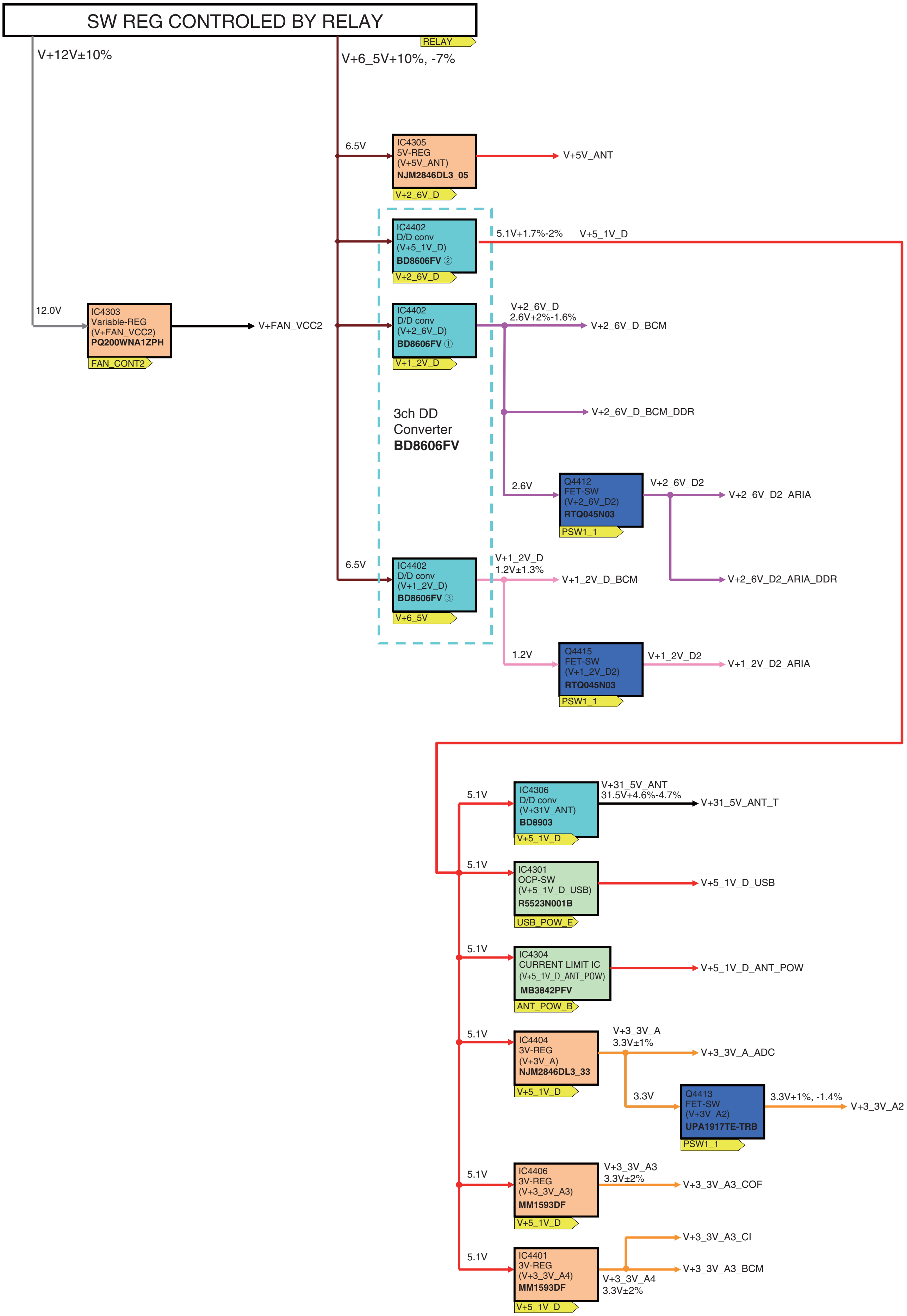
1→12.V+3_4V_STB
2→11.PC_HD
3→10.PC_VD
4→ 9.GND
5→ 8.PC_R
6→ 7.GND
7→ 6.PC_B
8→ 5.GND
9→ 4.PC_G
10→ 3.WP_EDID
11→ 2.V+5V_IO
12→ 1.GND

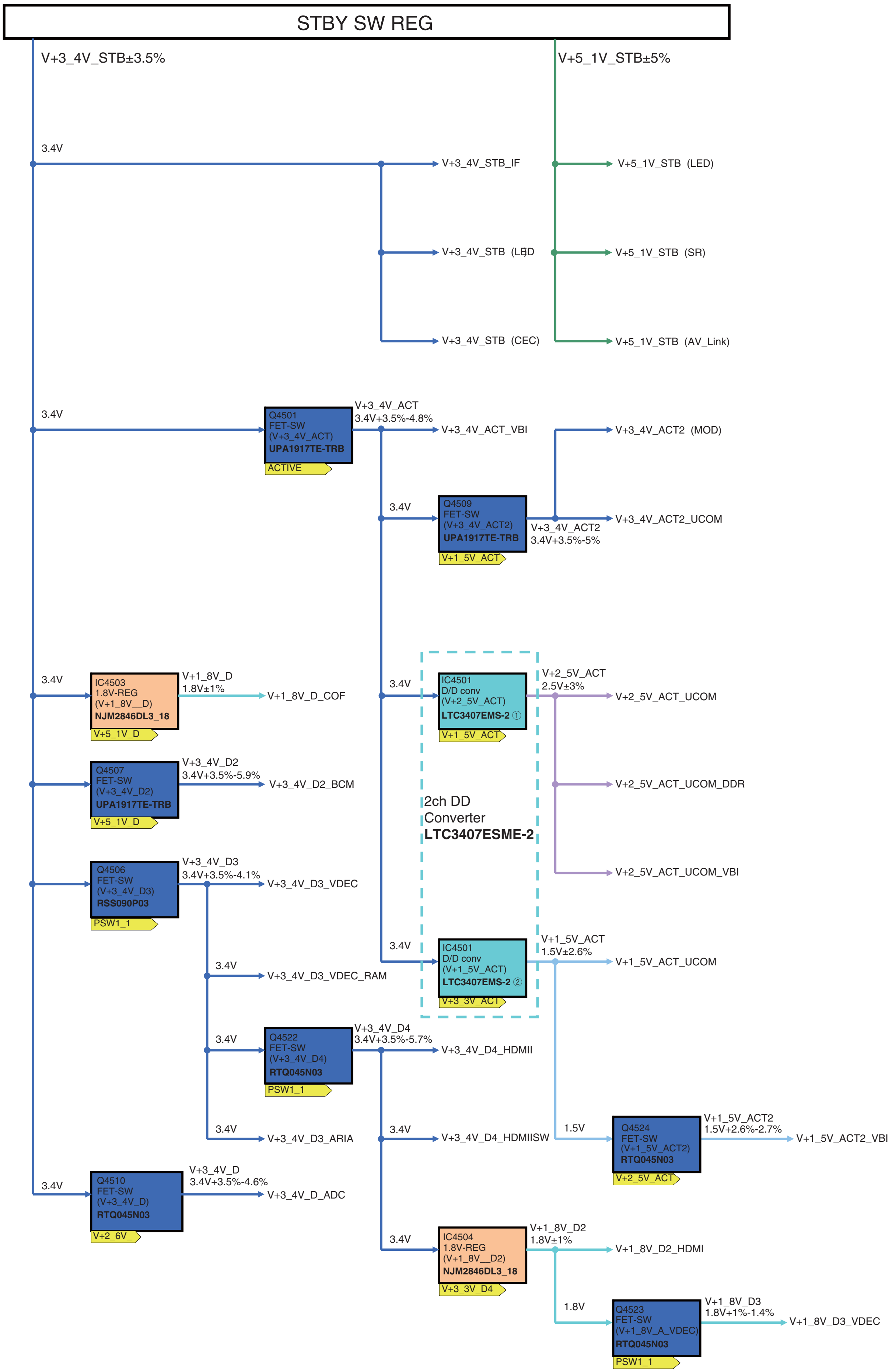
2.3 OVERALL BLOCK DIAGRAM (MULTI BASE SECTION)


A
B
C
D
E
F
Analog Audio signal
Analog Video signal
Component signal
Digital Video signal
Digital Audio signal
Synchronized signal
Data signal
Control signal
IF signal
CARD ASSY
CI SLOT A JA9451
CI SLOT B JA9452
U9101 (Sattelite Tuner)
I,Q
IC9102 STV-0903 (S2 Demodulator)
IC9306 CIMAXSP2L (Card I/F)
Selector
USB
LAN
M6 CN4107
JA6001
IC6201 EDD5116AFTA (512Mbit DDR)
IC6202 EDD5116AFTA (512Mbit DDR)
IC6203 EDD5116AFTA (512Mbit DDR)
IC6204 EDD5116AFTA (512Mbit DDR)
Add0-12
Data0-15
IC6001 BCM7404
IC6403 AGC1083 S29GL512P10TFIR1 (512Mbit FLASH)
U5301 AXF1191 (Terrestrial Tuner)
D_IF1
D_IF2
IC5401 DRX3975D (COFDM)
AIR SIF
SPDIF
I2S
DT_MON_CVBS
A_TUNER_V
AUDIO_OUT_L/R
JA7804 Audio Out
L/R IN
JA7701 Input1 SCART
AIR OUT L/R
CVBS
SCART1_OUT_V
RAPID_SW1
SLOW_SW1
CVBS
IC5701 TC90173FG (VBI Slicer)
L/R IN
JA7702 Input2 SCART
SCART OUT L/R
CVBS
Y/C
SCART2_OUT_V
SLOW_SW2
EMMA_DA_GY
L/R IN
JA7703 Input3 SCART
SCART OUT L/R
CVBS
Y/C
SCART3_OUT_V
RAPID_SW3
SLOW_SW3
IC8201 MSP5651M (MSP)
IC8001 R2S11006FT (AVSW)
Main Y/C
Sub Y/C
IC4702 CM0048BF (VDEC)
IC4701 HY57V641620FTP 64 Mbit (SDRAM)
SIDE IO ASSY
L/R IN
JA8601 Input5
CVBS
HP_L/R OUT
CN8602 Head Phone
SW OUT
JA7804 SUB WOOFER
COMP_Y
L/R IN
JA7803 Audio Input for INPUT2 Component
RGB
CLP
FB
PC_L/R IN
JA7802 Audio Input for PC
Input1 RGB
Input3 RGB
EMMA_DA_GY/BCB/RCR
OPT_OUT
JA7881 SPDIF
RAPID_SW1/3
SLOW_SW1/2/3
IC8101 R2S11001FT (RGBSW)
IC4801 AD9985KSTZ (ADC)
RGB/YPbPr
JA7805 INPUT2 Component
Input2 Y/Cb/Cr
CLP, H
CN9601 PC Input
PC_RGB
PC_H/V
CLP
CARD ASSY
SPDIF
IC4901 SII9125CTU (HDMI RX)
IC5001 CXB1444R (HDMI SW)
IC8401 TAS5122DCA (D-AMP)
JA8551 SPEAKER TERMINAL
IO_AUDIO ASSY
INPUT1 HDMI
INPUT3 HDMI
INPUT4 HDMI

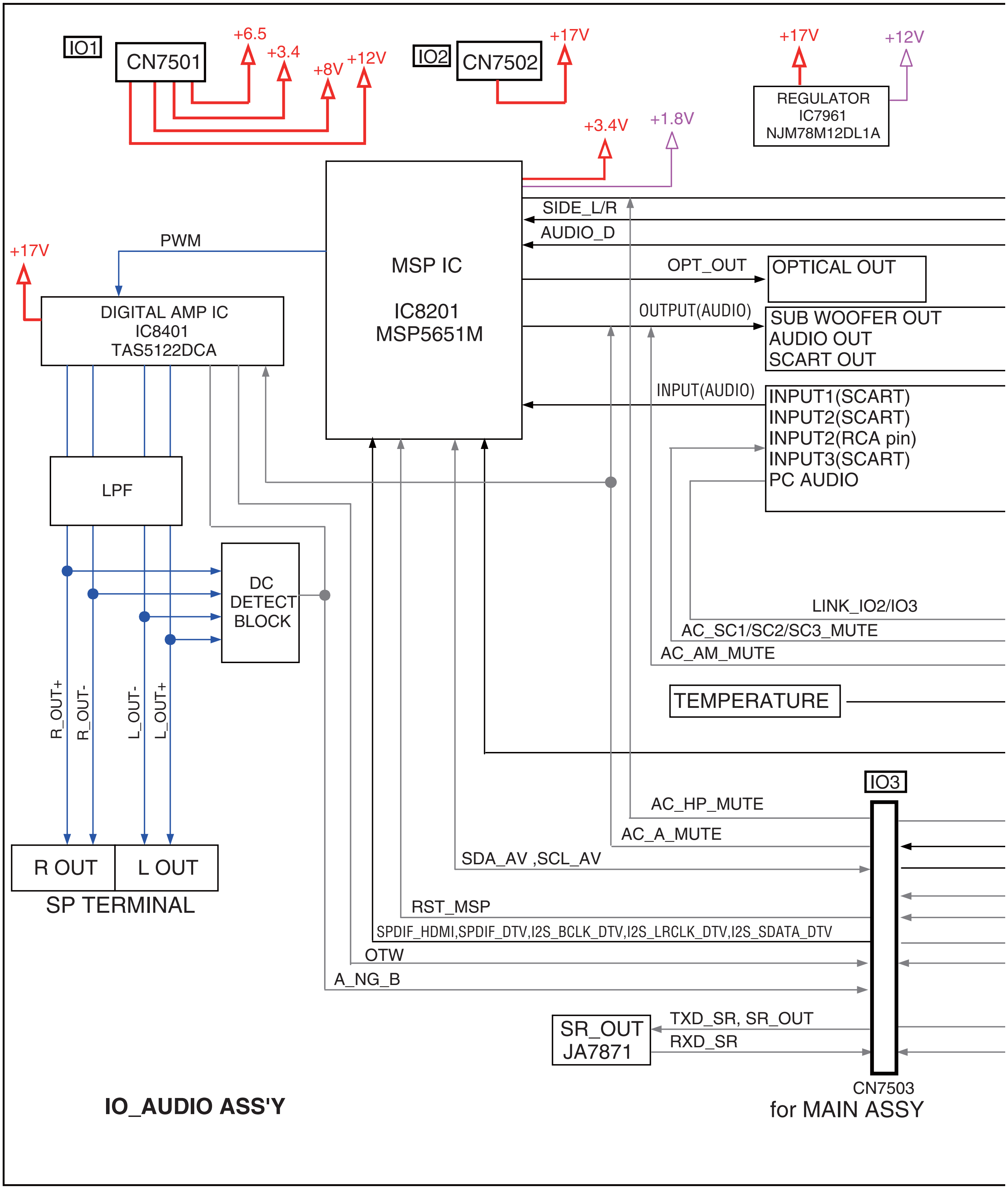

MAIN ASSY
FAN
FAN
FAN
FAN
Fan Connect
FAN CONNECT ASSY
FAN RESERVED
SIDE KEY ASSY
KEY
KEY1
KEY2
LED ASSY
LED
IR ASSY
IR
REM
RLS ASSY
RLS
RLS
M5
CN4202
M10
CN4201
M11
CN4209
M15
CN4208
IC6811
AGC1072
(M30620FCSGP)
IF UCOM
SR_OUT
TXD_SR
RXD_SR
SR_OUT
TXD_232C
RXD_232C
RS232C
IO_AUDIO ASSY
IC7003
uPD61123F1
(EMMA II SV)
IC7201
EDD5116AFTA
(512Mbit DDR)
Add0-12
Data0-15
IC7202
AGC1074
(S29GL032A90TFIR4)
(32Mbit FLASH)
IC7004
BR24L64F
(EEPROM)
RDATA
DIN7 OSD 8bit *4
RGB 10bit *3
RGB 10bit *3
To
DIGITAL
Ass'y
IC6702
EDD1232ABBH
128Mbit (DDR)
IC6703
EDD1232ABBH
128Mbit (DDR)
IC6704
EDD1232ABBH
128Mbit (DDR)
IC6501
PD6568A
(ARIA)
IC6701
AGC1079
(S29GL016A90TFIR2)
16Mbit Flash
DIN1_DVO (12bit)
DIN3_656DATA (10bit)
DIN4_656DATA (8bit)
DIN2(8Bit*3)
INT H/V, EXT H/V
DIN6 12bit *3

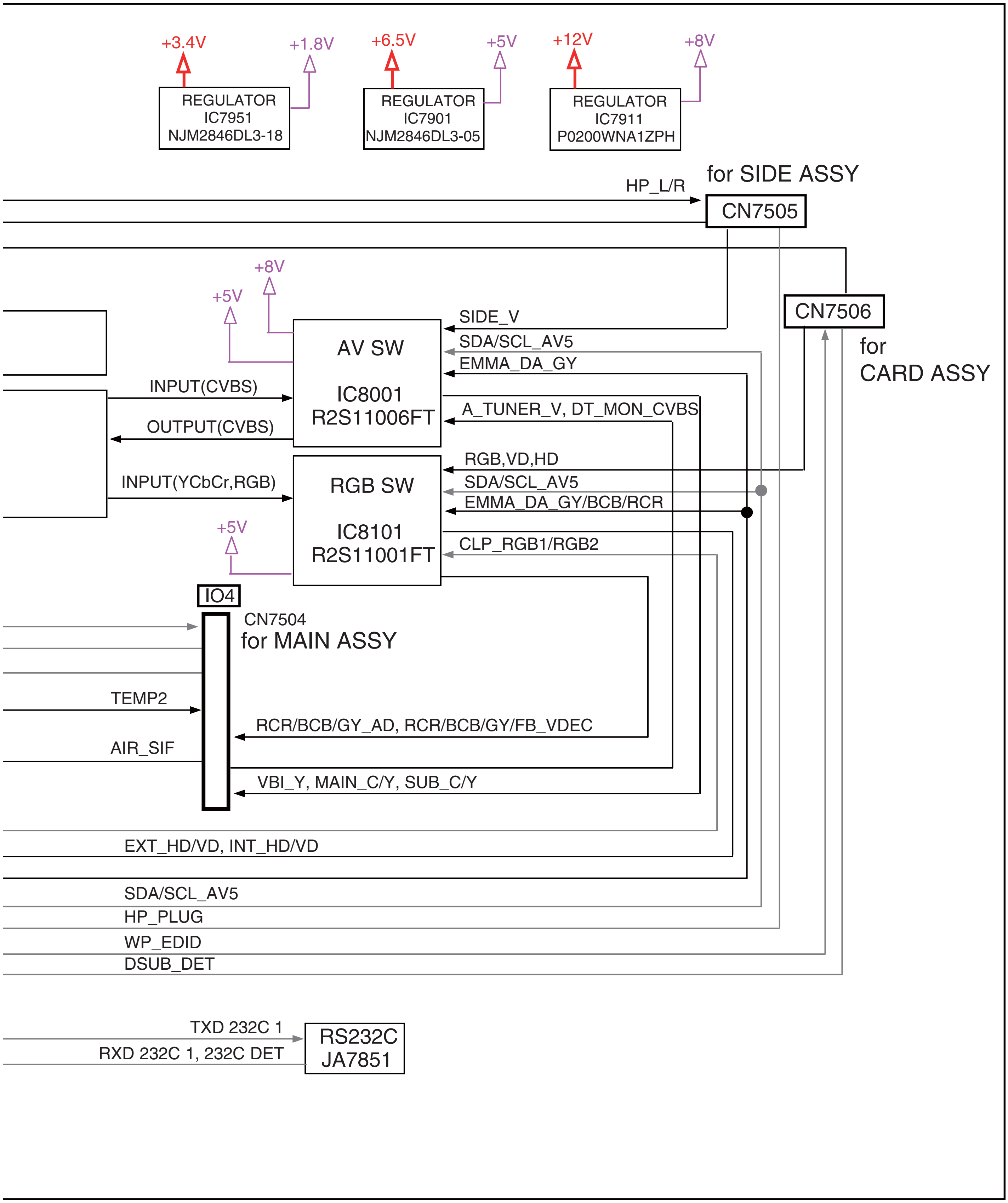
2.4 POWER SUPPLY BLOCK of MAIN ASSY


SW REG CONTROLED BY RELAY
RELAY
V+12V±10%
V+6_5V+10%, -7%
6.5V
IC4305
5V-REG
(V+5V_ANT)
NJM2846DL3_05
V+2_6V_D
V+5V_ANT
IC4402
D/D conv
(V+5_1V_D)
BD8606FV ②
V+2_6V_D
5.1V+1.7%-2%
V+5_1V_D
12.0V
IC4303
Variable-REG
(V+FAN_VCC2)
PQ200WNA1ZPH
FAN_CONT2
V+FAN_VCC2
IC4402
D/D conv
(V+2_6V_D)
BD8606FV ①
V+1_2V_D
V+2_6V_D
2.6V+2%-1.6%
V+2_6V_D_BCM
V+2_6V_D_BCM_DDR
3ch DD
Converter
BD8606FV
2.6V
Q4412
FET-SW
(V+2_6V_D2)
RTQ045N03
PSW1_1
V+2_6V_D2
V+2_6V_D2_ARIA
V+2_6V_D2_ARIA_DDR
6.5V
IC4402
D/D conv
(V+1_2V_D)
BD8606FV ③
V+6_5V
V+1_2V_D
1.2V±1.3%
V+1_2V_D_BCM
1.2V
Q4415
FET-SW
(V+1_2V_D2)
RTQ045N03
PSW1_1
V+1_2V_D2
V+1_2V_D2_ARIA
5.1V
IC4306
D/D conv
(V+31V_ANT)
BD8903
V+5_1V_D
V+31_5V_ANT
31.5V+4.6%-4.7%
V+31_5V_ANT_T
5.1V
IC4301
OCP-SW
(V+5_1V_D_USB)
R5523N001B
USB_POW_E
V+5_1V_D_USB
5.1V
IC4304
CURRENT LIMIT IC
(V+5_1V_D_ANT_POW)
MB3842PFV
ANT_POW_B
V+5_1V_D_ANT_POW
5.1V
IC4404
3V-REG
(V+3V_A)
NJM2846DL3_33
V+5_1V_D
V+3_3V_A
3.3V±1%
V+3_3V_A_ADC
3.3V
Q4413
FET-SW
(V+3V_A2)
UPA1917TE-TRB
PSW1_1
3.3V+1%, -1.4%
V+3_3V_A2
5.1V
IC4406
3V-REG
(V+3_3V_A3)
MM1593DF
V+5_1V_D
V+3_3V_A3
3.3V±2%
V+3_3V_A3_COF
5.1V
IC4401
3V-REG
(V+3_3V_A4)
MM1593DF
V+5_1V_D
V+3_3V_A3_CI
V+3_3V_A3_BCM
V+3_3V_A4
3.3V±2%


STBY SW REG
V+3_4V_STB±3.5%
V+5_1V_STB±5%
3.4V
V+3_4V_STB_IF
V+3_4V_STB (LED)
V+3_4V_STB (CEC)
V+5_1V_STB (LED)
V+5_1V_STB (SR)
V+5_1V_STB (AV_Link)
3.4V
Q4501
FET-SW
(V+3_4V_ACT)
UPA1917TE-TRB
ACTIVE
V+3_4V_ACT
3.4V+3.5%-4.8%
V+3_4V_ACT_VBI
V+3_4V_ACT2 (MOD)
3.4V
Q4509
FET-SW
(V+3_4V_ACT2)
UPA1917TE-TRB
V+1_5V_ACT
V+3_4V_ACT2
3.4V+3.5%-5%
V+3_4V_ACT2_UCOM
3.4V
IC4503
1.8V-REG
(V+1_8V__D)
NJM2846DL3_18
V+5_1V_D
V+1_8V_D
1.8V±1%
V+1_8V_D_COF
3.4V
IC4501
D/D conv
(V+2_5V_ACT)
LTC3407EMS-2 ①
V+1_5V_ACT
V+2_5V_ACT
2.5V±3%
V+2_5V_ACT_UCOM
V+2_5V_ACT_UCOM_DDR
V+2_5V_ACT_UCOM_VBI
Q4507
FET-SW
(V+3_4V_D2)
UPA1917TE-TRB
V+5_1V_D
V+3_4V_D2
3.4V+3.5%-5.9%
V+3_4V_D2_BCM
2ch DD
Converter
LTC3407ESME-2
Q4506
FET-SW
(V+3_4V_D3)
RSS090P03
PSW1_1
V+3_4V_D3
3.4V+3.5%-4.1%
V+3_4V_D3_VDEC
3.4V
V+3_4V_D3_VDEC_RAM
3.4V
IC4501
D/D conv
(V+1_5V_ACT)
LTC3407EMS-2 ②
V+3_3V_ACT
V+1_5V_ACT
1.5V±2.6%
V+1_5V_ACT_UCOM
3.4V
Q4522
FET-SW
(V+3_4V_D4)
RTQ045N03
PSW1_1
V+3_4V_D4
3.4V+3.5%-5.7%
V+3_4V_D4_HDMII
3.4V
V+3_4V_D3_ARIA
3.4V
V+3_4V_D4_HDMIISW
1.5V
Q4524
FET-SW
(V+1_5V_ACT2)
RTQ045N03
V+2_5V_ACT
V+1_5V_ACT2
1.5V+2.6%-2.7%
V+1_5V_ACT2_VBI
3.4V
Q4510
FET-SW
(V+3_4V_D)
RTQ045N03
V+2_6V_
V+3_4V_D
3.4V+3.5%-4.6%
V+3_4V_D_ADC
3.4V
IC4504
1.8V-REG
(V+1_8V__D2)
NJM2846DL3_18
V+3_3V_D4
V+1_8V_D2
1.8V±1%
V+1_8V_D2_HDMI
1.8V
Q4523
FET-SW
(V+1_8V_A_VDEC)
RTQ045N03
PSW1_1
V+1_8V_D3
1.8V+1%-1.4%
V+1_8V_D3_VDEC

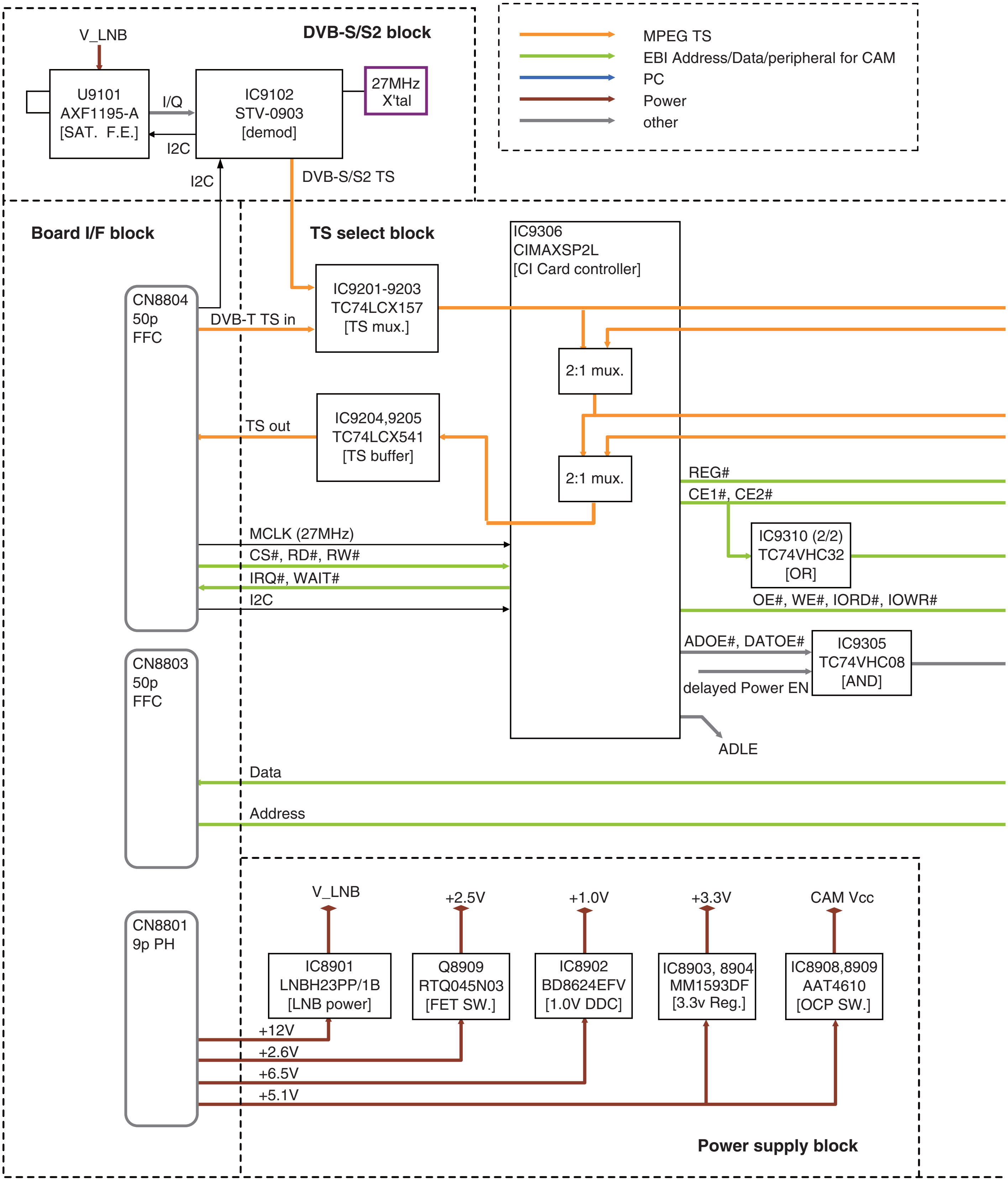
2.5 IO_AUDIO ASSY

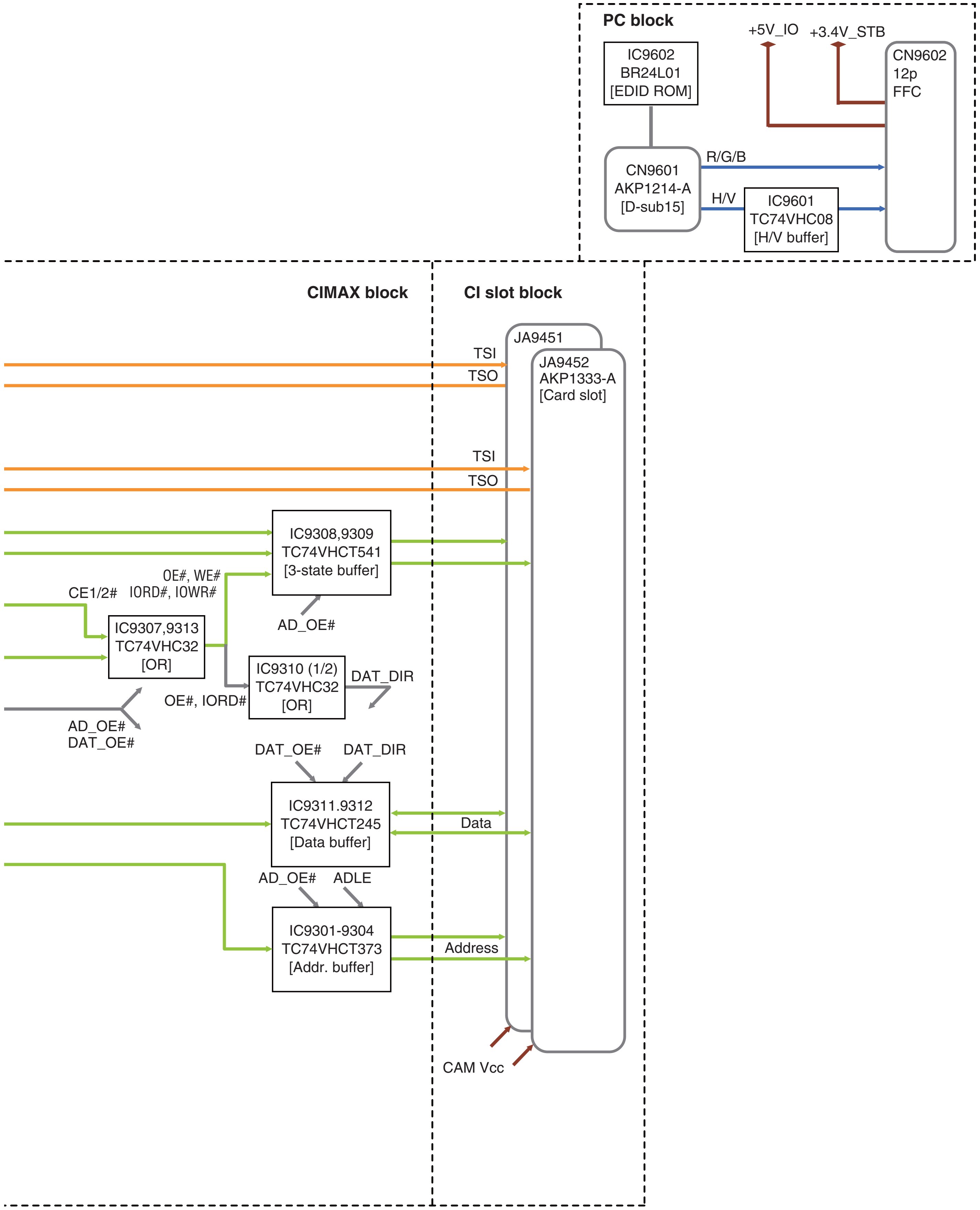

IO1
CN7501
+6.5
+3.4
+8V
+12V
IO2
CN7502
+17V
+17V
+12V
REGULATOR
IC7961
NJM78M12DL1A
+3.4V
+1.8V
MSP IC
IC8201
MSP5651M
SIDE_L/R
AUDIO_D
OPT_OUT
OPTICAL OUT
OUTPUT(AUDIO)
SUB WOOFER OUT
AUDIO OUT
SCART OUT
INPUT(AUDIO)
INPUT1(SCART)
INPUT2(SCART)
INPUT2(RCA pin)
INPUT3(SCART)
PC AUDIO
+17V
PWM
DIGITAL AMP IC
IC8401
TAS5122DCA
LPF
DC
DETECT
BLOCK
R_OUT+
R_OUT-
L_OUT-
L_OUT+
R OUT
L OUT
SP TERMINAL
LINK_IO2/IO3
AC_SC1/SC2/SC3_MUTE
AC_AM_MUTE
TEMPERATURE
IO3
AC_HP_MUTE
AC_A_MUTE
SDA_AV ,SCL_AV
RST_MSP
SPDIF_HDMI,SPDIF_DTV,I2S_BCLK_DTV,I2S_LRCLK_DTV,I2S_SDATA_DTV
OTW
A_NG_B
SR_OUT
JA7871
TXD_SR, SR_OUT
RXD_SR
CN7503
for MAIN ASSY
IO_AUDIO ASS'Y



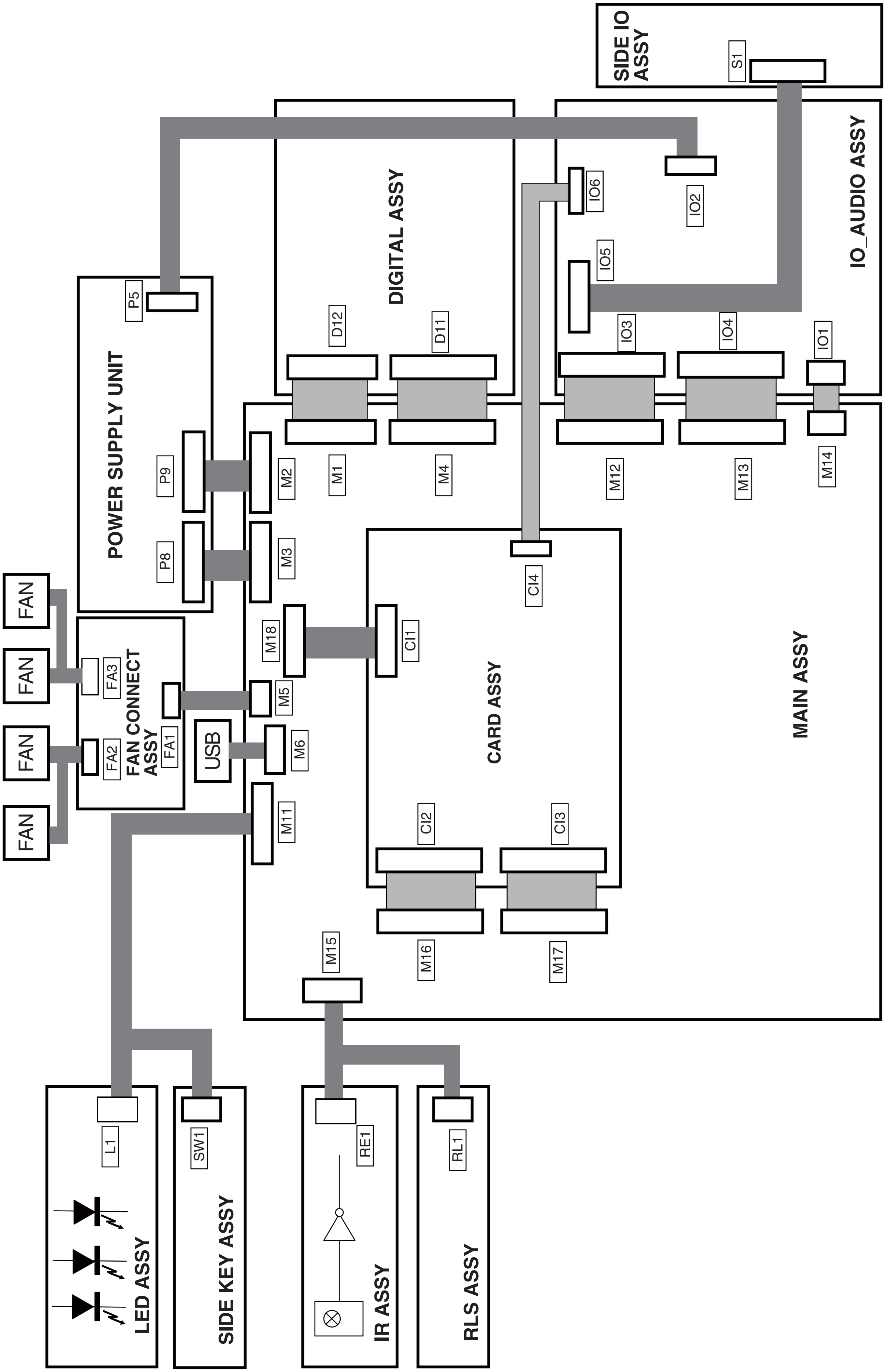
+3.4V
+1.8V
REGULATOR
IC7951
NJM2846DL3-18
+6.5V
+5V
REGULATOR
IC7901
NJM2846DL3-05
+12V
+8V
REGULATOR
IC7911
P0200WNA1ZPH
HP_L/R
for SIDE ASSY
CN7505
+8V
+5V
CN7506
for
CARD ASSY
AV SW
IC8001
R2S11006FT
SIDE_V
SDA/SCL_AV5
EMMA_DA_GY
INPUT(CVBS)
OUTPUT(CVBS)
A_TUNER_V, DT_MON_CVBS
RGB SW
IC8101
R2S11001FT
INPUT(YCbCr,RGB)
RGB,VD,HD
SDA/SCL_AV5
EMMA_DA_GY/BCB/RCR
+5V
CLP_RGB1/RGB2
IO4
CN7504
for MAIN ASSY
TEMP2
AIR_SIF
RCR/BCB/GY_AD, RCR/BCB/GY/FB_VDEC
VBI_Y, MAIN_C/Y, SUB_C/Y
EXT_HD/VD, INT_HD/VD
SDA/SCL_AV5
HP_PLUG
WP_EDID
DSUB_DET
TXD 232C 1
RXD 232C 1, 232C DET
RS232C
JA7851

2.6 CARD ASSY


DVB-S/S2 block
V_LNB
U9101
AXF1195-A
[SAT. F.E.]
I/Q
I2C
IC9102
STV-0903
[demod]
27MHz
X'tal
I2C
DVB-S/S2 TS
MPEG TS
EBI Address/Data/peripheral for CAM
PC
Power
other
Board I/F block
TS select block
CN8804
50p
FFC
DVB-T TS in
IC9201-9203
TC74LCX157
[TS mux.]
IC9306
CIMAXSP2L
[CI Card controller]
2:1 mux.
TS out
IC9204,9205
TC74LCX541
[TS buffer]
2:1 mux.
REG#
CE1#, CE2#
IC9310 (2/2)
TC74VHC32
[OR]
MCLK (27MHz)
CS#, RD#, RW#
IRQ#, WAIT#
I2C
OE#, WE#, IORD#, IOWR#
ADOE#, DATOE#
IC9305
TC74VHC08
[AND]
delayed Power EN
ADLE
CN8803
50p
FFC
Data
Address
V_LNB
+2.5V
+1.0V
+3.3V
CAM Vcc
CN8801
9p PH
IC8901
LNBH23PP/1B
[LNB power]
Q8909
RTQ045N03
[FET SW.]
IC8902
BD8624EFV
[1.0V DDC]
IC8903, 8904
MM1593DF
[3.3v Reg.]
IC8908,8909
AAT4610
[OCP SW.]
+12V
+2.6V
+6.5V
+5.1V
Power supply block


PC block
+5V_IO
+3.4V_STB
IC9602
BR24L01
[EDID ROM]
CN9602
12p
FFC
R/G/B
CN9601
AKP1214-A
[D-sub15]
H/V
IC9601
TC74VHC08
[H/V buffer]
CIMAX block
CI slot block
JA9451
JA9452
AKP1333-A
[Card slot]
TSI
TSO
TSI
TSO
IC9308,9309
TC74VHCT541
[3-state buffer]
OE#, WE#
CE1/2#
IORD#, IOWR#
AD_OE#
IC9307,9313
TC74VHC32
[OR]
IC9310 (1/2)
TC74VHC32
[OR]
DAT_DIR
OE#, IORD#
AD_OE#
DAT_OE#
DAT_OE#
DAT_DIR
IC9311.9312
TC74VHCT245
[Data buffer]
Data
AD_OE#
ADLE
IC9301-9304
TC74VHCT373
[Addr. buffer]
Address
CAM Vcc

2.7 LED and IR ASSYS


SIDE IO ASSY
S1
IO_AUDIO ASSY
IO6
IO2
IO5
IO3
IO4
IO1
DIGITAL ASSY
D12
D11
POWER SUPPLY UNIT
P5
P9
P8
M2
M1
M4
M12
M13
M14
M3
M18
M5
M6
M11
CI1
CI4
CI2
CI3
CARD ASSY
MAIN ASSY
M16
M17
M15
FAN
FAN
FAN
FAN
FAN CONNECT ASSY
FA1
FA2
FA3
USB
L1
SW1
RE1
RL1
LED ASSY
SIDE KEY ASSY
IR ASSY
RLS ASSY

3. DIAGNOSIS

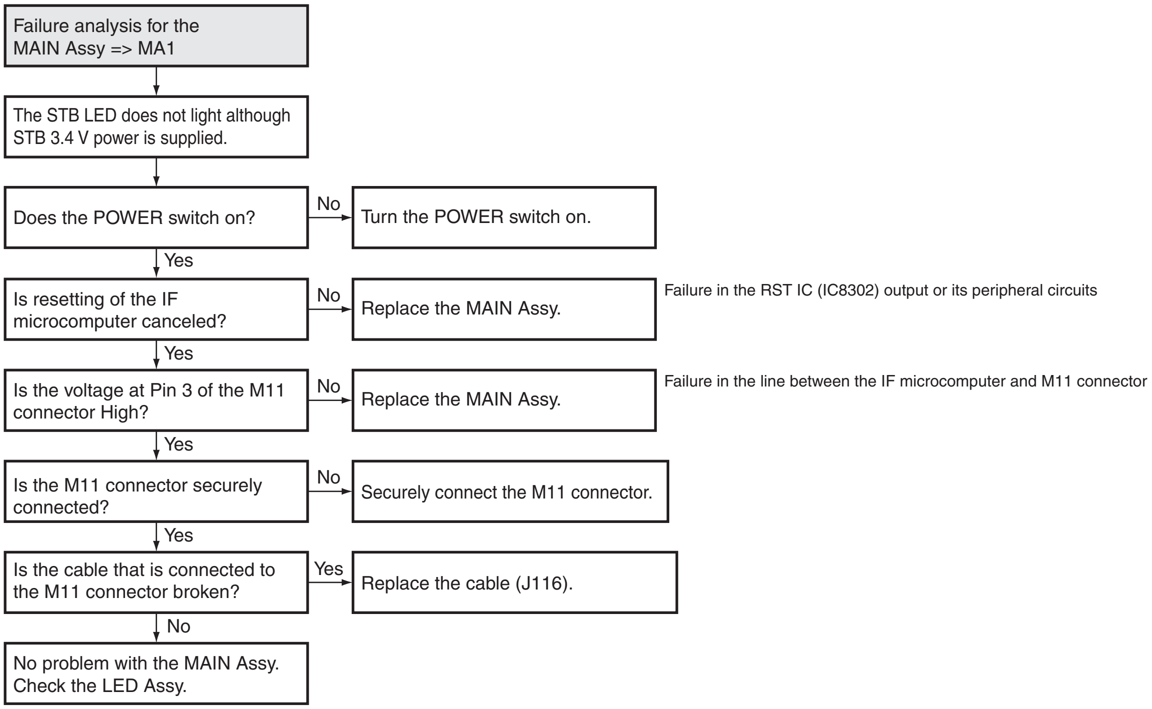
3.1 DIAGNOSIS FLOWCHART OF FAILURE ANALYSIS

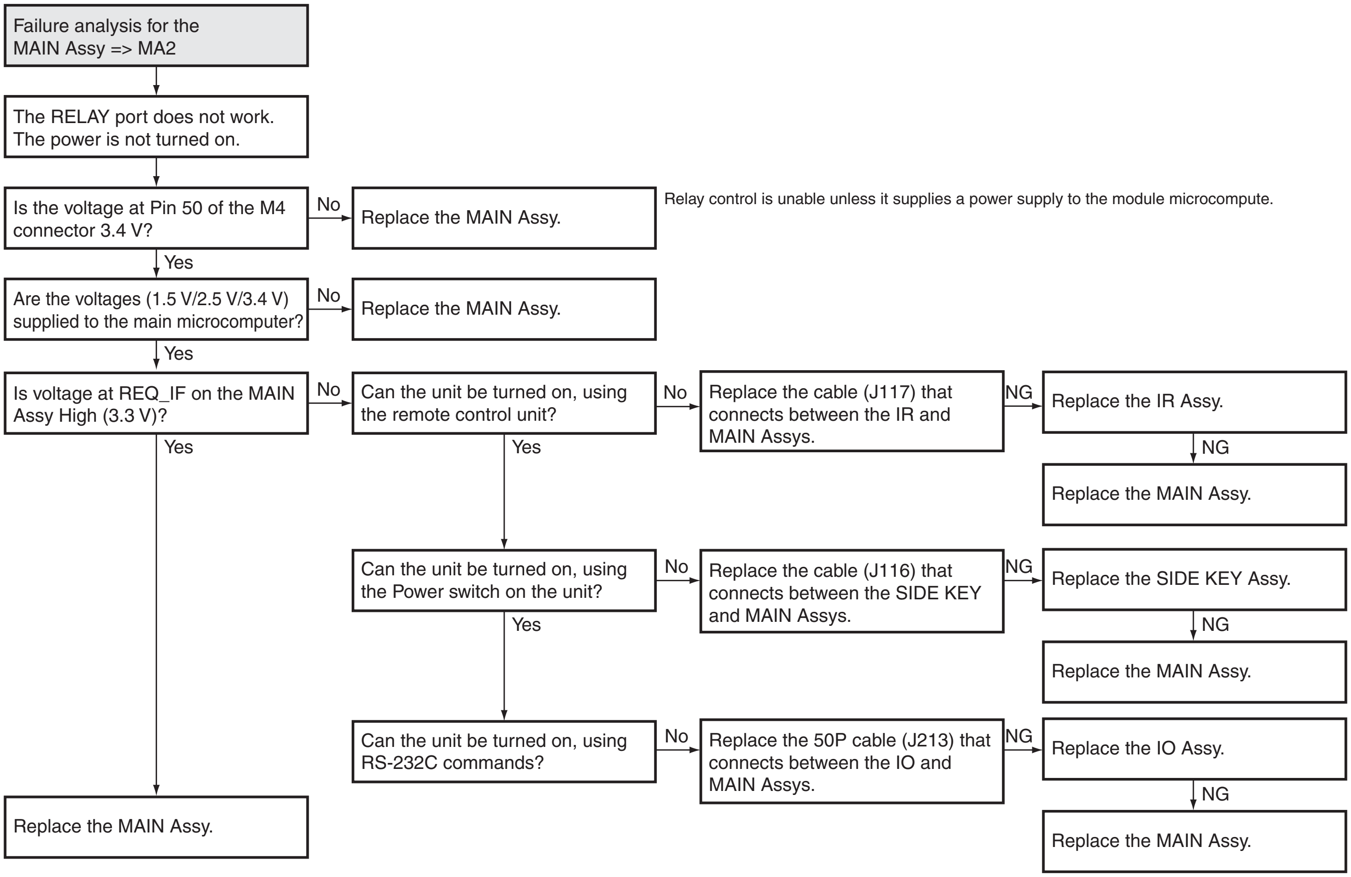
Following items are same as the PDP-LX5090.

[1] WHOLE UNIT
[2] POWER SUPPLY UNIT
[3] DRIVE ASSY
[4] DIGITAL ASSY
[7] AUDIO SYSTEM

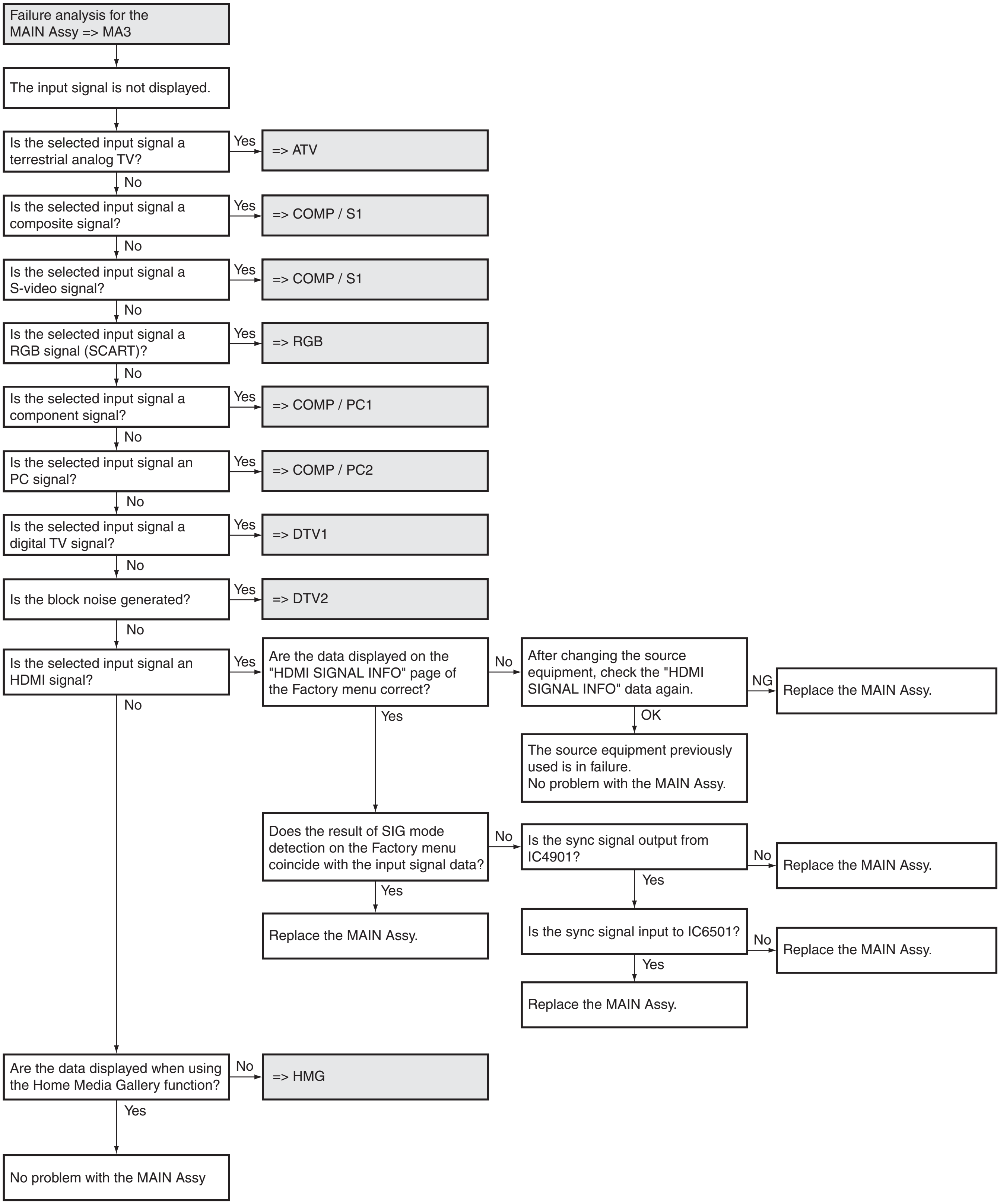
[5] MAIN ASSY

Flowchart of Failure Analysis for The MAIN Assy


Failure analysis for the MAIN Assy => MA1
The STB LED does not light although STB 3.4 V power is supplied.
Does the POWER switch on?
No
Turn the POWER switch on.
Yes
Is resetting of the IF microcomputer canceled?
No
Replace the MAIN Assy.
Failure in the RST IC (IC8302) output or its peripheral circuits
Yes
Is the voltage at Pin 3 of the M11 connector High?
No
Replace the MAIN Assy.
Failure in the line between the IF microcomputer and M11 connector
Yes
Is the M11 connector securely connected?
No
Securely connect the M11 connector.
Yes
Is the cable that is connected to the M11 connector broken?
Yes
Replace the cable (J116).
No
No problem with the MAIN Assy. Check the LED Assy.

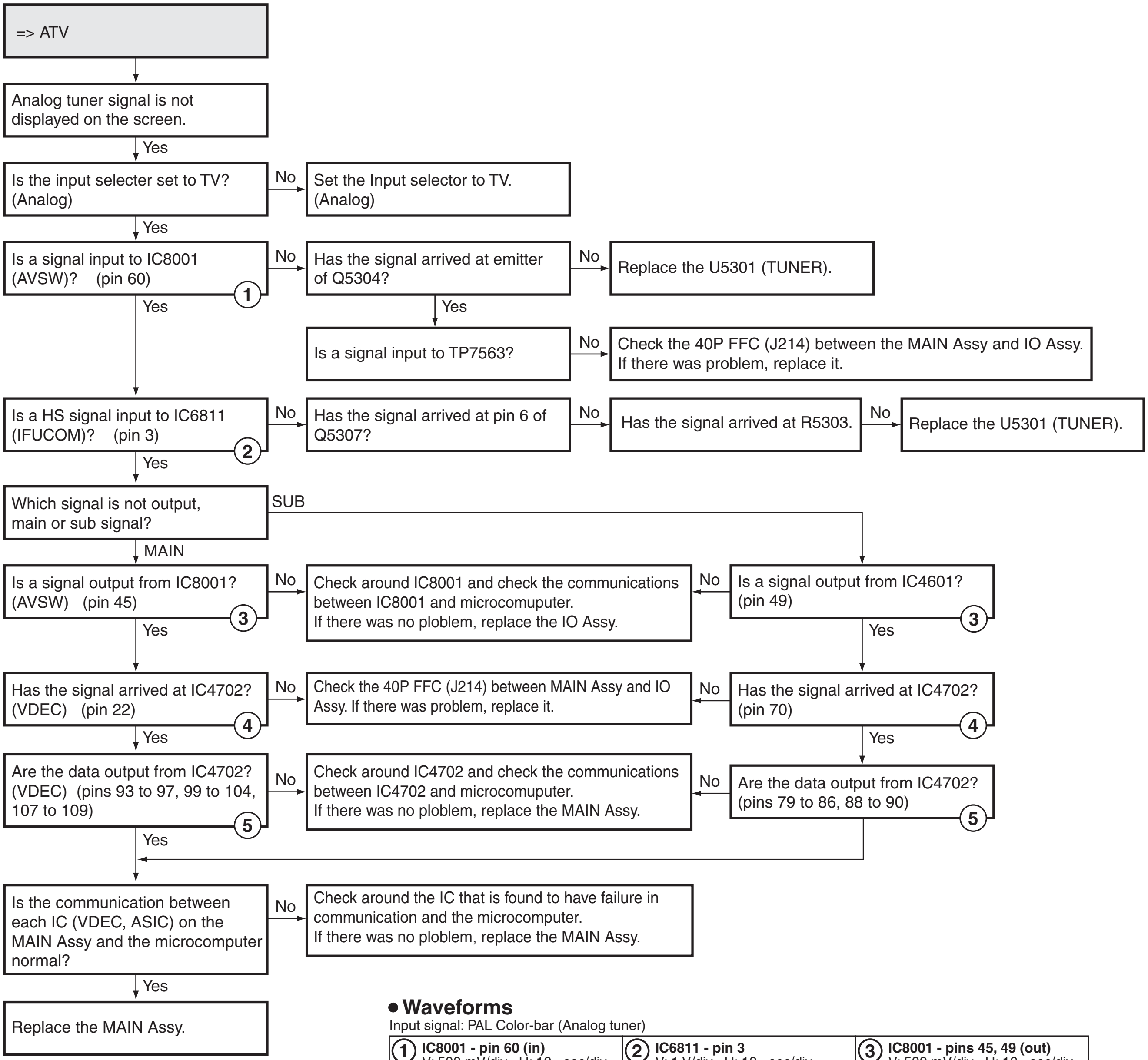

Failure analysis for the MAIN Assy => MA2
The RELAY port does not work. The power is not turned on.
Is the voltage at Pin 50 of the M4 connector 3.4 V?
No
Replace the MAIN Assy.
Relay control is unable unless it supplies a power supply to the module microcompute.
Yes
Are the voltages (1.5 V/2.5 V/3.4 V) supplied to the main microcomputer?
No
Replace the MAIN Assy.
Yes
Is voltage at REQ_IF on the MAIN Assy High (3.3 V)?
No
Can the unit be turned on, using the remote control unit?
No
Replace the cable (J117) that connects between the IR and MAIN Assys.
NG
Replace the IR Assy.
NG
Replace the MAIN Assy.
Yes
Can the unit be turned on, using the Power switch on the unit?
No
Replace the cable (J116) that connects between the SIDE KEY and MAIN Assys.
NG
Replace the SIDE KEY Assy.
NG
Replace the MAIN Assy.
Yes
Can the unit be turned on, using RS-232C commands?
No
Replace the 50P cable (J213) that connects between the IO and MAIN Assys.
NG
Replace the IO Assy.
NG
Replace the MAIN Assy.
Yes
Replace the MAIN Assy.

Flowchart of Failure Analysis for The MAIN Assy


Failure analysis for the MAIN Assy => MA3
The input signal is not displayed.
Is the selected input signal a terrestrial analog TV?
Yes
=> ATV
No
Is the selected input signal a composite signal?
Yes
=> COMP / S1
No
Is the selected input signal a S-video signal?
Yes
=> COMP / S1
No
Is the selected input signal a RGB signal (SCART)?
Yes
=> RGB
No
Is the selected input signal a component signal?
Yes
=> COMP / PC1
No
Is the selected input signal an PC signal?
Yes
=> COMP / PC2
No
Is the selected input signal a digital TV signal?
Yes
=> DTV1
No
Is the block noise generated?
Yes
=> DTV2
No
Is the selected input signal an HDMI signal?
Yes
Are the data displayed on the "HDMI SIGNAL INFO" page of the Factory menu correct?
No
After changing the source equipment, check the "HDMI SIGNAL INFO" data again.
NG
Replace the MAIN Assy.
OK
The source equipment previously used is in failure. No problem with the MAIN Assy.
Yes
Does the result of SIG mode detection on the Factory menu coincide with the input signal data?
No
Is the sync signal output from IC4901?
No
Replace the MAIN Assy.
Yes
Is the sync signal input to IC6501?
No
Replace the MAIN Assy.
Yes
Replace the MAIN Assy.
Yes
Replace the MAIN Assy.
No
Are the data displayed when using the Home Media Gallery function?
No
=> HMG
Yes
No problem with the MAIN Assy

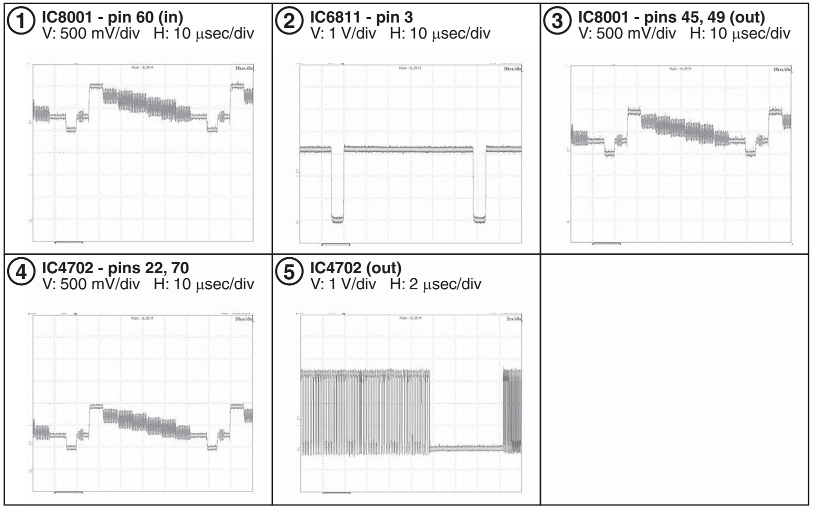
[6] VIDEO SYSTEM

Flowchart of Failure Analysis for The Video System


=> ATV
Analog tuner signal is not displayed on the screen.
Yes
Is the input selecter set to TV? (Analog)
No
Set the Input selector to TV. (Analog)
Yes
Is a signal input to IC8001 (AVSW)? (pin 60)
①
No
Has the signal arrived at emitter of Q5304?
No
Replace the U5301 (TUNER).
Yes
Is a signal input to TP7563?
No
Check the 40P FFC (J214) between the MAIN Assy and IO Assy. If there was problem, replace it.
Yes
Is a HS signal input to IC6811 (IFUCOM)? (pin 3)
②
No
Has the signal arrived at pin 6 of Q5307?
No
Has the signal arrived at R5303.
No
Replace the U5301 (TUNER).
Yes
Which signal is not output, main or sub signal?
SUB
MAIN
Is a signal output from IC8001? (AVSW) (pin 45)
③
No
Check around IC8001 and check the communications between IC8001 and microcomuputer. If there was no ploblem, replace the IO Assy.
No
Is a signal output from IC4601? (pin 49)
③
Yes
Yes
Has the signal arrived at IC4702? (VDEC) (pin 22)
④
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
No
Has the signal arrived at IC4702? (pin 70)
④
Yes
Yes
Are the data output from IC4702? (VDEC) (pins 93 to 97, 99 to 104, 107 to 109)
⑤
No
Check around IC4702 and check the communications between IC4702 and microcomuputer. If there was no ploblem, replace the MAIN Assy.
No
Are the data output from IC4702? (pins 79 to 86, 88 to 90)
⑤
Yes
Is the communication between each IC (VDEC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

• Waveforms

Input signal: PAL Color-bar (Analog tuner)

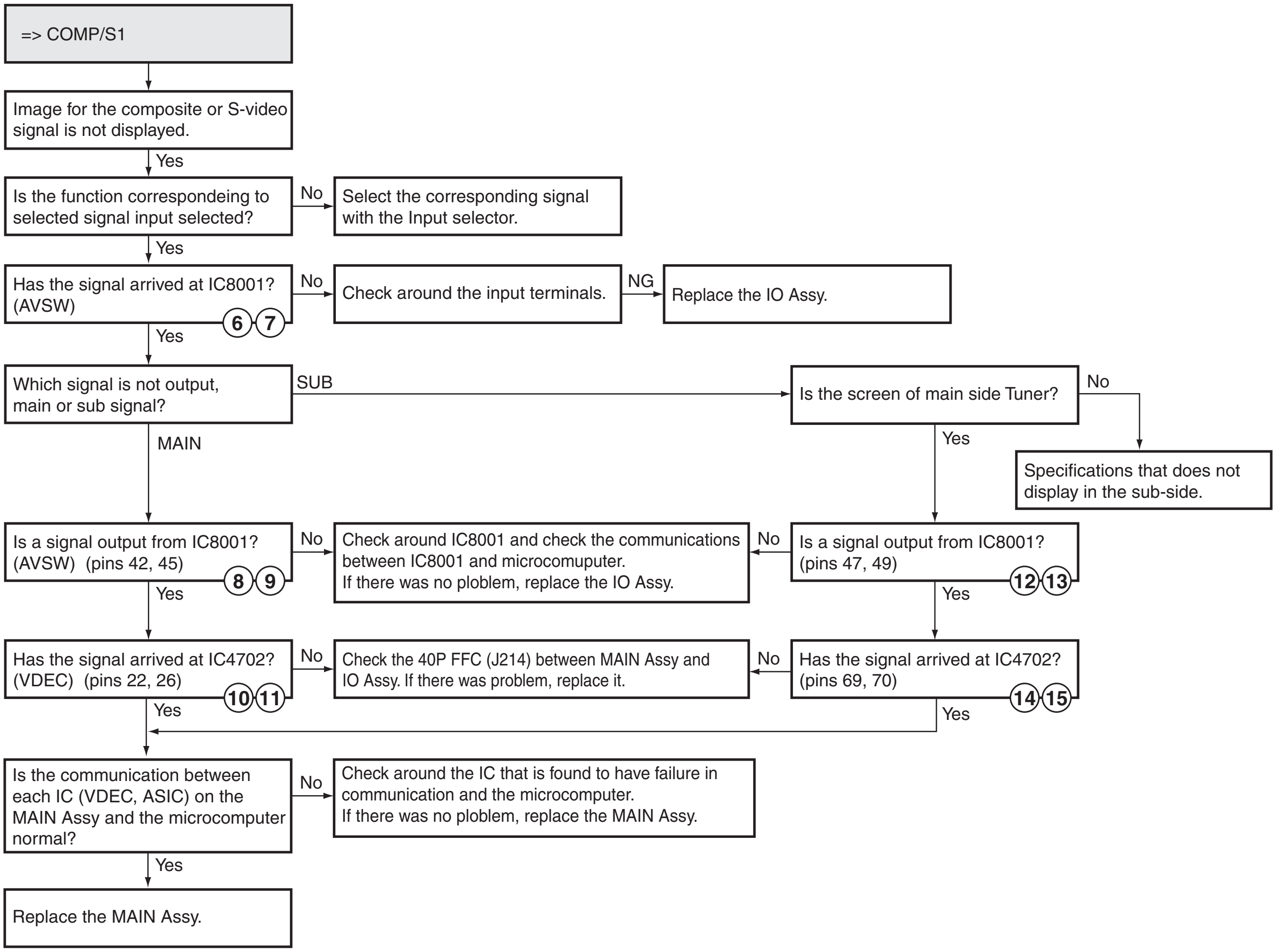

① **IC8001 - pin 60 (in)** V: 500 mV/div H: 10 μsec/div

② **IC6811 - pin 3** V: 1 V/div H: 10 μsec/div

③ **IC8001 - pins 45, 49 (out)** V: 500 mV/div H: 10 μsec/div

④ **IC4702 - pins 22, 70** V: 500 mV/div H: 10 μsec/div

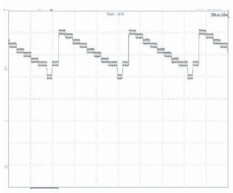
⑤ **IC4702 (out)** V: 1 V/div H: 2 μsec/div


=> COMP/S1
Image for the composite or S-video signal is not displayed.
Yes
Is the function correspondeing to selected signal input selected?
No
Select the corresponding signal with the Input selector.
Yes
Has the signal arrived at IC8001? (AVSW)
⑥ ⑦
No
Check around the input terminals.
NG
Replace the IO Assy.
Yes
Which signal is not output, main or sub signal?
SUB
Is the screen of main side Tuner?
No
Specifications that does not display in the sub-side.
Yes
MAIN
Is a signal output from IC8001? (AVSW) (pins 42, 45)
⑧ ⑨
No
Check around IC8001 and check the communications between IC8001 and microcomuputer. If there was no ploblem, replace the IO Assy.
No
Is a signal output from IC8001? (pins 47, 49)
⑫ ⑬
Yes
Yes
Has the signal arrived at IC4702? (VDEC) (pins 22, 26)
⑩ ⑪
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
No
Has the signal arrived at IC4702? (pins 69, 70)
⑭ ⑮
Yes
Yes
Is the communication between each IC (VDEC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

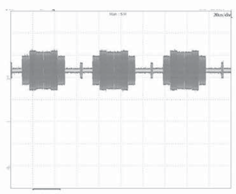
• Waveforms

Input signal: PAL Color-bar (S termial)

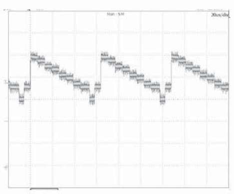
⑥ **IC8001 - pins 87, 93 (Y)**
V: 500 mV/div H: 20 µsec/div



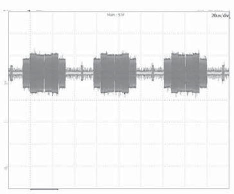
⑦ **IC8001 - pins 89, 95 (C)**
V: 500 mV/div H: 20 µsec/div



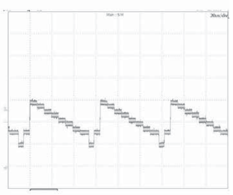
⑧ **IC8001 - pin 45 (Main Y)**
V: 500 mV/div H: 20 µsec/div



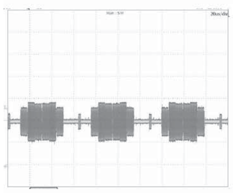
⑨ **IC8001 - pin 42 (Main C)**
V: 500 mV/div H: 20 µsec/div



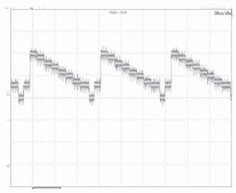
⑩ **IC4702 - pin 22 (Main Y)**
V: 500 mV/div H: 20 µsec/div



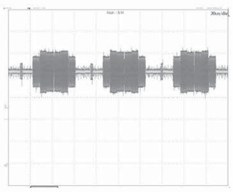
⑪ **IC4702 - pin 26 (Main C)**
V: 500 mV/div H: 20 µsec/div



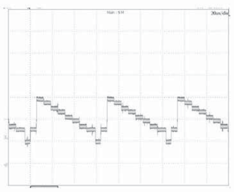
⑫ **IC8001 - pin 49 (Sub Y)**
V: 500 mV/div H: 20 µsec/div



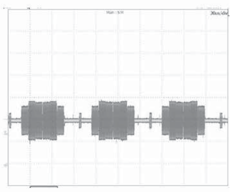
⑬ **IC8001 - pin 47 (Sub C)**
V: 500 mV/div H: 20 µsec/div

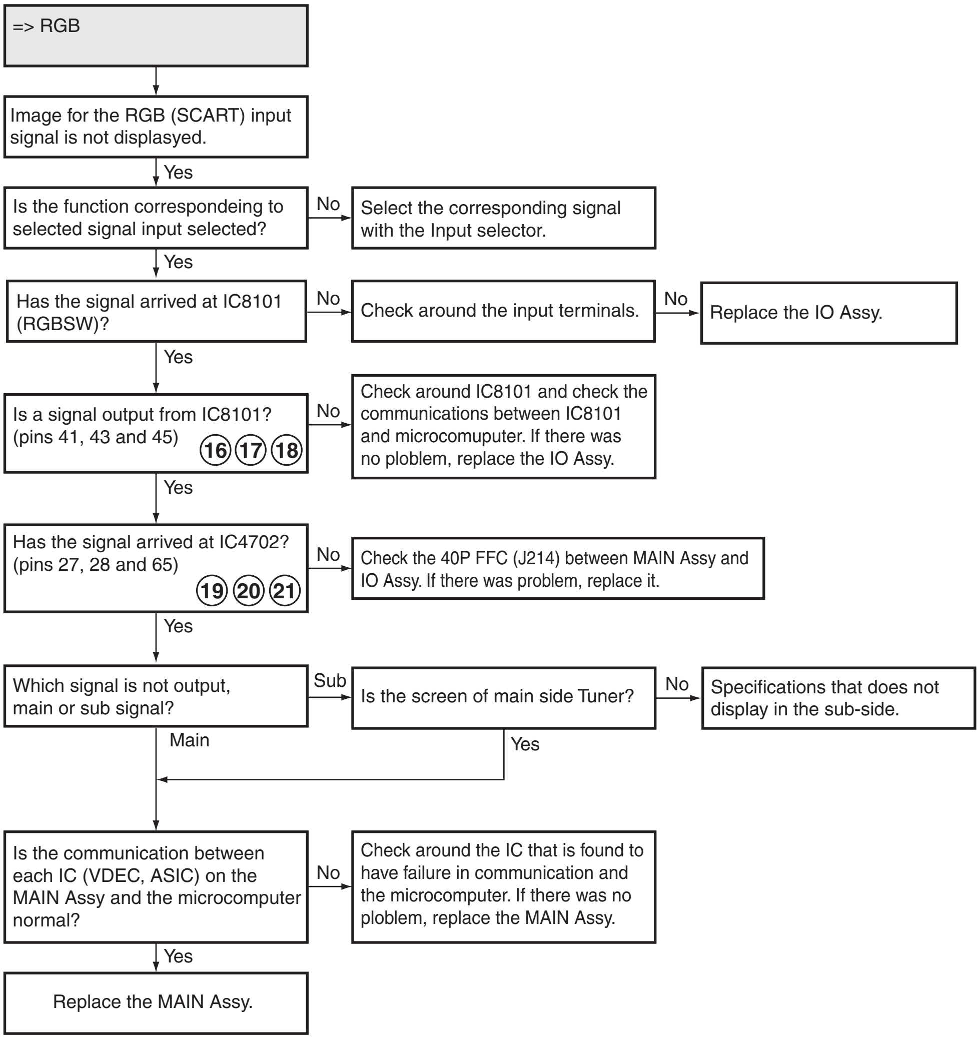


⑭ **IC4702 - pin 70 (Sub Y)**
V: 500 mV/div H: 20 µsec/div



⑮ **IC4702 - pin 69 (Sub C)**
V: 500 mV/div H: 20 µsec/div

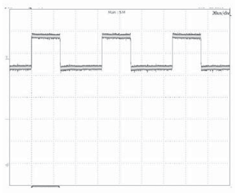



=> RGB
Image for the RGB (SCART) input signal is not displasyed.
Yes
Is the function correspondeing to selected signal input selected?
No
Select the corresponding signal with the Input selector.
Yes
Has the signal arrived at IC8101 (RGBSW)?
No
Check around the input terminals.
No
Replace the IO Assy.
Yes
Is a signal output from IC8101? (pins 41, 43 and 45) ⑯⑰⑱
No
Check around IC8101 and check the communications between IC8101 and microcomuputer. If there was no ploblem, replace the IO Assy.
Yes
Has the signal arrived at IC4702? (pins 27, 28 and 65) ⑲⑳㉑
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
Yes
Which signal is not output, main or sub signal?
Sub
Is the screen of main side Tuner?
No
Specifications that does not display in the sub-side.
Yes
Main
Is the communication between each IC (VDEC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

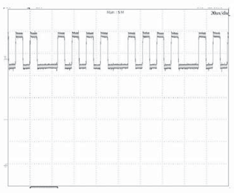
● Waveforms

Input signal: PAL Color-bar (SCART RGB terminal)

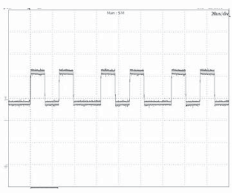
⑯ **IC8101 - pin 45 (G out)**
V: 500 mV/div H: 20 µS/div



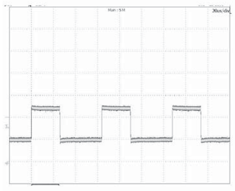
⑰ **IC8101 - pin 43 (B out)**
V: 500 mV/div H: 20 µS/div



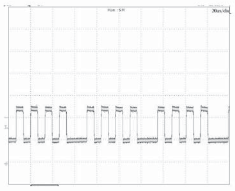
⑱ **IC8101 - pin 41 (B out)**
V: 500 mV/div H: 20 µS/div



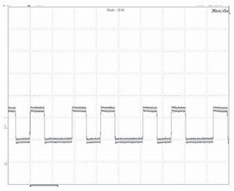
⑲ **IC4702 - pin 65 (GY)**
V: 500 mV/div H: 20 µS/div

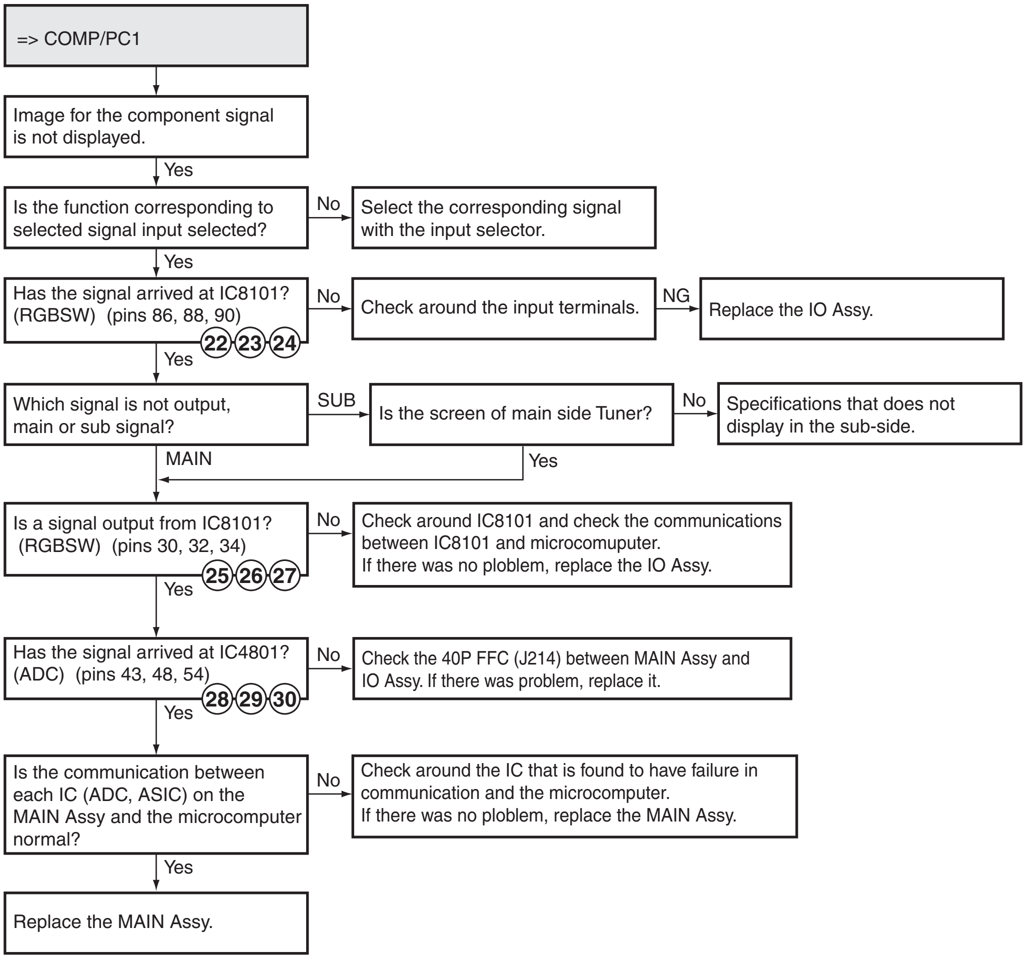


⑳ **IC47021 - pin 27 (BCB)**
V: 500 mV/div H: 20 µS/div



㉑ **IC4702 - pin 28 (BCR)**
V: 500 mV/div H: 20 µS/div

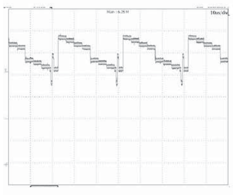



=> COMP/PC1
Image for the component signal is not displayed.
Yes
Is the function corresponding to selected signal input selected?
No
Select the corresponding signal with the input selector.
Yes
Has the signal arrived at IC8101? (RGBSW) (pins 86, 88, 90)
㉒㉓㉔
No
Check around the input terminals.
NG
Replace the IO Assy.
Yes
Which signal is not output, main or sub signal?
SUB
Is the screen of main side Tuner?
No
Specifications that does not display in the sub-side.
MAIN
Yes
Is a signal output from IC8101? (RGBSW) (pins 30, 32, 34)
㉕㉖㉗
No
Check around IC8101 and check the communications between IC8101 and microcomuputer. If there was no ploblem, replace the IO Assy.
Yes
Has the signal arrived at IC4801? (ADC) (pins 43, 48, 54)
㉘㉙㉚
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
Yes
Is the communication between each IC (ADC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

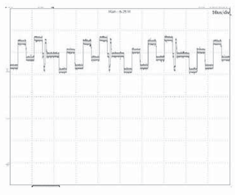
• Waveforms

Input signal: Color-bar (Component 720p/50 Hz)

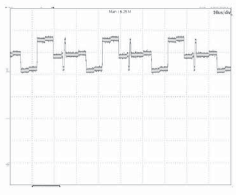
㉒ **IC8101 - pin 86 (Y)**
V: 500 mV/div H: 20 µsec/div



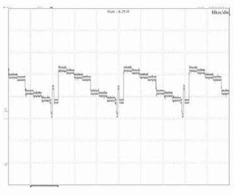
㉓ **IC8101 - pin 88 (Pb)**
V: 500 mV/div H: 20 µsec/div



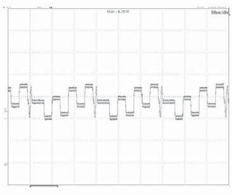
㉔ **IC8101 - pin 90 (Pr)**
V: 500 mV/div H: 20 µsec/div



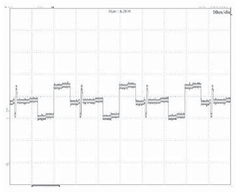
㉕ **IC8101 - pin 34 (Y)**
V: 500 mV/div H: 20 µsec/div



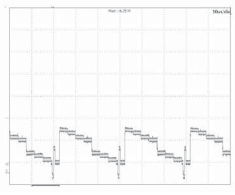
㉖ **IC8101 - pin 32 (Pb)**
V: 500 mV/div H: 20 µsec/div



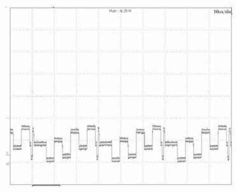
㉗ **IC8101 - pin 30 (Pr)**
V: 500 mV/div H: 20 µsec/div



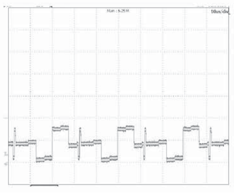
㉘ **IC4801 - pin 48 (Y)**
V: 500 mV/div H: 20 µsec/div

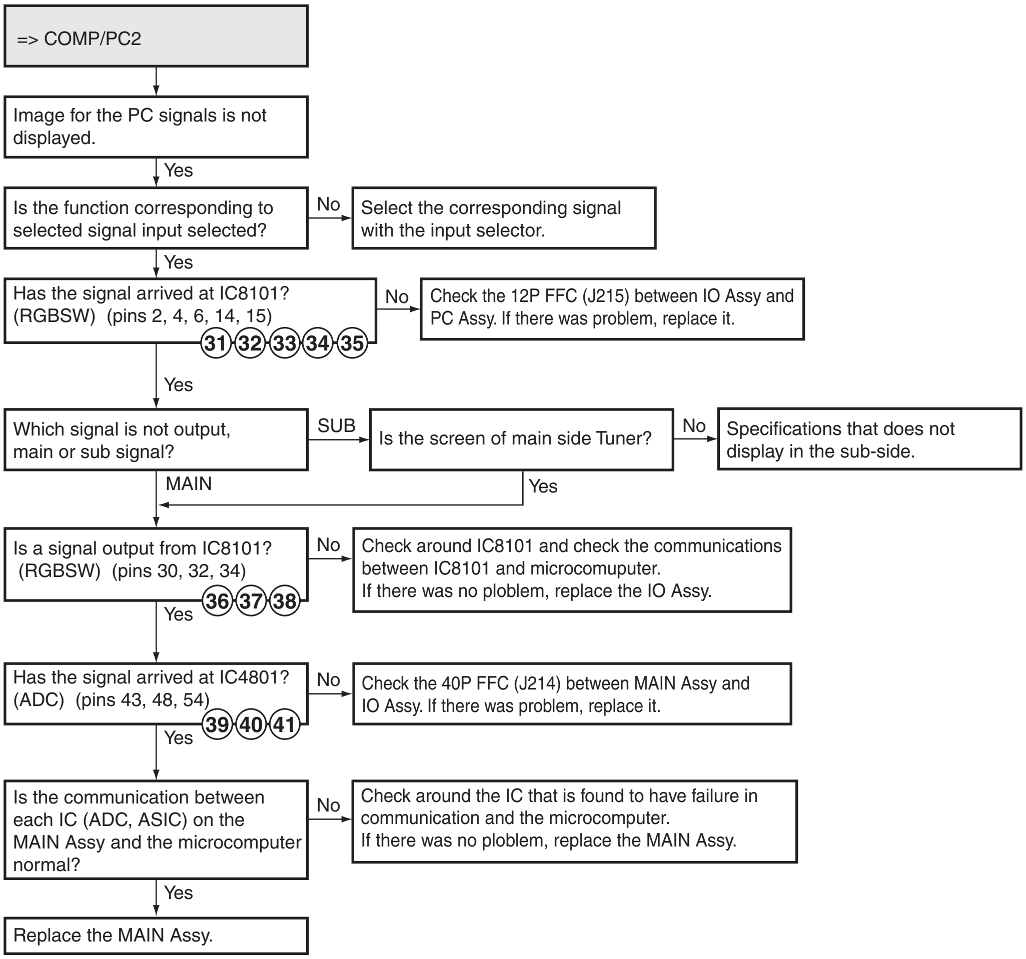


㉙ **IC4801 - pin 43 (Pb)**
V: 500 mV/div H: 20 µsec/div



㉚ **IC4801 - pin 54 (Pr)**
V: 500 mV/div H: 20 µsec/div

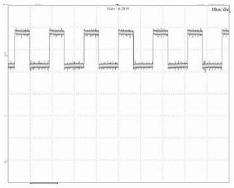



=> COMP/PC2
Image for the PC signals is not displayed.
Yes
Is the function corresponding to selected signal input selected?
No
Select the corresponding signal with the input selector.
Yes
Has the signal arrived at IC8101? (RGBSW) (pins 2, 4, 6, 14, 15)
㉛ ㉜ ㉝ ㉞ ㉟
No
Check the 12P FFC (J215) between IO Assy and PC Assy. If there was problem, replace it.
Yes
Which signal is not output, main or sub signal?
SUB
Is the screen of main side Tuner?
No
Specifications that does not display in the sub-side.
Yes
MAIN
Is a signal output from IC8101? (RGBSW) (pins 30, 32, 34)
㊱ ㊲ ㊳
No
Check around IC8101 and check the communications between IC8101 and microcomuputer. If there was no ploblem, replace the IO Assy.
Yes
Has the signal arrived at IC4801? (ADC) (pins 43, 48, 54)
㊴ ㊵ ㊶
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
Yes
Is the communication between each IC (ADC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

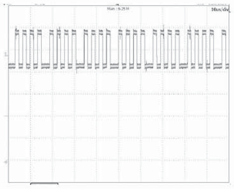
● Waveforms

Input signal: Color-bar (PC SXGA/60 Hz)

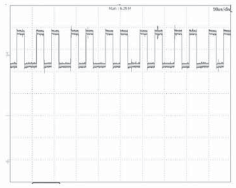
㉛ **IC8101 - pin 2 (G in)**
V: 500 mV/div H: 10 µsec/div



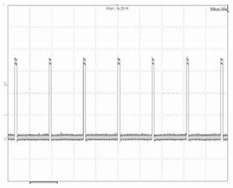
㉜ **IC8101 - pin 4 (B in)**
V: 500 mV/div H: 10 µsec/div



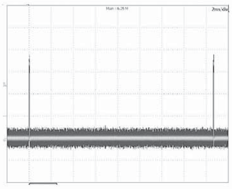
㉝ **IC8101 - pin 6 (R in)**
V: 500 mV/div H: 10 µsec/div



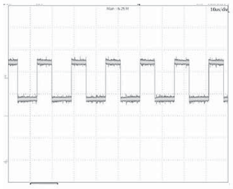
㉞ **IC8101 - pin 14 (HD in)**
V: 1 V/div H: 10 µsec/div
(polarity is no care)



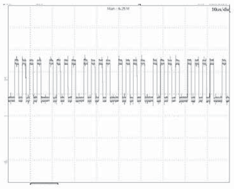
㉟ **IC8101 - pin 15 (VD in)**
V: 1 V/div H: 2 msec/div
(polarity is no care)



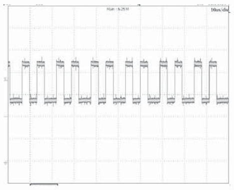
㊱ **IC8101 - pin 34 (G out)**
V: 500 mV/div H: 10 µsec/div



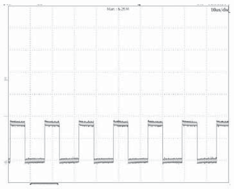
㊲ **IC8101 - pin 32 (B out)**
V: 500 mV/div H: 10 µsec/div



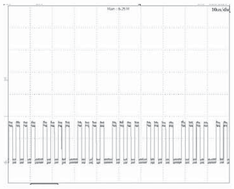
㊳ **IC8101 - pin 30 (R out)**
V: 500 mV/div H: 10 µsec/div



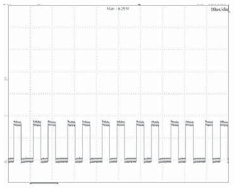
㊴ **IC4801 - pin 48 (G)**
V: 500 mV/div H: 10 µsec/div

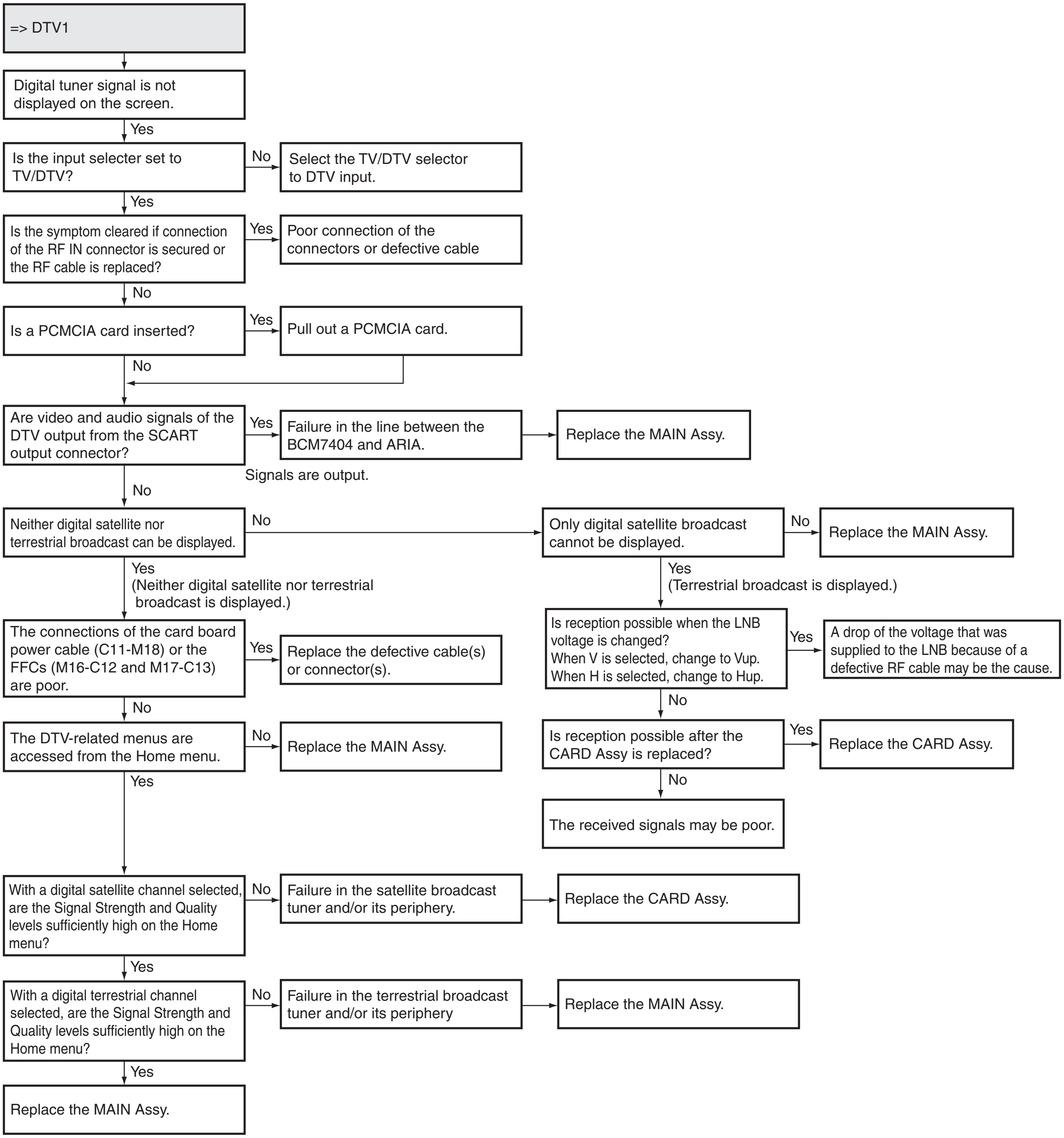


㊵ **IC4801 - pin 43 (B)**
V: 500 mV/div H: 10 µsec/div



㊶ **IC4801 - pin 54 (R)**
V: 500 mV/div H: 10 µsec/div



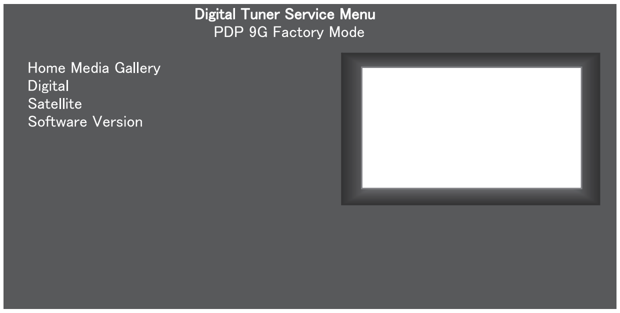

=> DTV1
Digital tuner signal is not displayed on the screen.
Yes
Is the input selecter set to TV/DTV?
No
Select the TV/DTV selector to DTV input.
Yes
Is the symptom cleared if connection of the RF IN connector is secured or the RF cable is replaced?
Yes
Poor connection of the connectors or defective cable
No
Is a PCMCIA card inserted?
Yes
Pull out a PCMCIA card.
No
Are video and audio signals of the DTV output from the SCART output connector?
Yes
Failure in the line between the BCM7404 and ARIA.
Replace the MAIN Assy.
Signals are output.
No
Neither digital satellite nor terrestrial broadcast can be displayed.
No
Only digital satellite broadcast cannot be displayed.
No
Replace the MAIN Assy.
Yes
(Neither digital satellite nor terrestrial broadcast is displayed.)
Yes
(Terrestrial broadcast is displayed.)
The connections of the card board power cable (C11-M18) or the FFCs (M16-C12 and M17-C13) are poor.
Yes
Replace the defective cable(s) or connector(s).
Is reception possible when the LNB voltage is changed? When V is selected, change to Vup. When H is selected, change to Hup.
Yes
A drop of the voltage that was supplied to the LNB because of a defective RF cable may be the cause.
No
No
The DTV-related menus are accessed from the Home menu.
No
Replace the MAIN Assy.
Is reception possible after the CARD Assy is replaced?
Yes
Replace the CARD Assy.
No
The received signals may be poor.
Yes
With a digital satellite channel selected, are the Signal Strength and Quality levels sufficiently high on the Home menu?
No
Failure in the satellite broadcast tuner and/or its periphery.
Replace the CARD Assy.
Yes
With a digital terrestrial channel selected, are the Signal Strength and Quality levels sufficiently high on the Home menu?
No
Failure in the terrestrial broadcast tuner and/or its periphery
Replace the MAIN Assy.
Yes
Replace the MAIN Assy.

[Common to the DTVs 1 and 2]
How to Display the DTB Service Menu

As you can display the DTB Service Menu from Factory mode, you should have a remote control unit that supports Factory mode.

Step 1: Press the Factory key on the remote control unit to display the INFORMATION screen in Factory mode.
Step 2: Press the Mute key on the remote control unit 3 times to display the INITIALIZE screen.
Step 3: Press the ⬇ key on the remote control unit twice so that DTB SERVICE MODE (+) is displayed at the bottom of the screen.
Step 4: Press the ENTER/SET key on the remote control so that MODE SHIFT <=> :No is displayed at the bottom of the screen.
Step 5: Press the ⬅ or ➡ key on the remote control so that MODE SHIFT <=> :YES is displayed at the bottom of the screen.
Step 6: Press the ENTER/SET key on the remote control unit for 5 sec or more to display the DTB Service Menu.

Top page of the DTB Service Menu



Digital Tuner Service Menu
PDP 9G Factory Mode

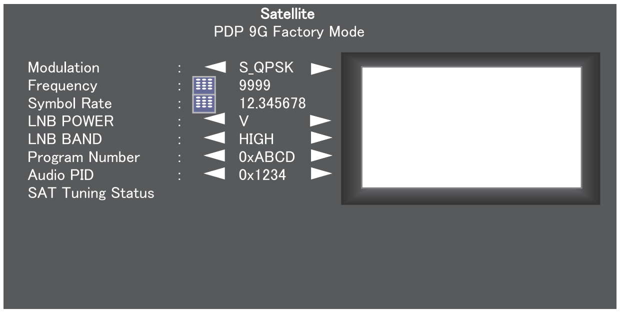
Home Media Gallery
Digital
Satellite
Software Version

Digital : Service menu for digital terrestrial broadcast reception
Satellite : Service menu for digital satellite broadcast reception

■ How to Change the LNB Voltage on the DTV Service Menu

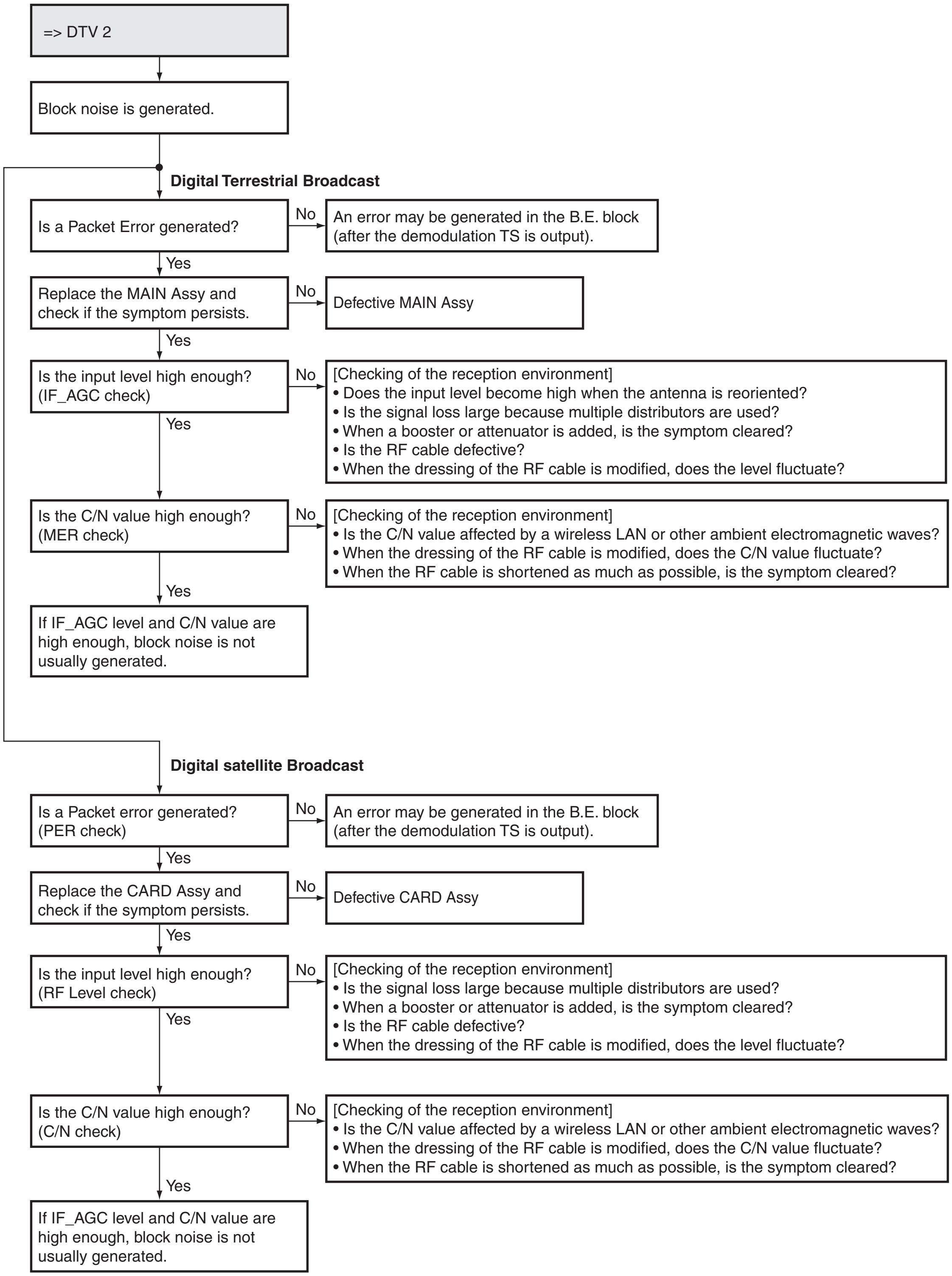
On the Satellite screen of the DTV Service menu below, move the cursor to LNB POWER by using the ⬇ key on the remote control unit then change the LNB voltage, using the ⬅ or ➡ key.

The LNB voltage values are as shown below:
V: 13V (Typ.)
H: 18V (Typ.)
Vup: V+1V
Hup: H+1V



Satellite
PDP 9G Factory Mode

Modulation : ◄ S_QPSK ►
Frequency : 9999
Symbol Rate : 12.345678
LNB POWER : ◄ V ►
LNB BAND : ◄ HIGH ►
Program Number : ◄ 0xABCD ►
Audio PID : ◄ 0x1234 ►
SAT Tuning Status



=> DTV 2

Block noise is generated.

Digital Terrestrial Broadcast

Is a Packet Error generated?

An error may be generated in the B.E. block (after the demodulation TS is output).

Replace the MAIN Assy and check if the symptom persists.

Defective MAIN Assy

Is the input level high enough? (IF_AGC check)

[Checking of the reception environment]
- Does the input level become high when the antenna is reoriented?
- Is the signal loss large because multiple distributors are used?
- When a booster or attenuator is added, is the symptom cleared?
- Is the RF cable defective?
- When the dressing of the RF cable is modified, does the level fluctuate?

Is the C/N value high enough? (MER check)

[Checking of the reception environment]
- Is the C/N value affected by a wireless LAN or other ambient electromagnetic waves?
- When the dressing of the RF cable is modified, does the C/N value fluctuate?
- When the RF cable is shortened as much as possible, is the symptom cleared?

If IF_AGC level and C/N value are high enough, block noise is not usually generated.

Digital satellite Broadcast

Is a Packet error generated? (PER check)

An error may be generated in the B.E. block (after the demodulation TS is output).

Replace the CARD Assy and check if the symptom persists.

Defective CARD Assy

Is the input level high enough? (RF Level check)

[Checking of the reception environment]
- Is the signal loss large because multiple distributors are used?
- When a booster or attenuator is added, is the symptom cleared?
- Is the RF cable defective?
- When the dressing of the RF cable is modified, does the level fluctuate?

Is the C/N value high enough? (C/N check)

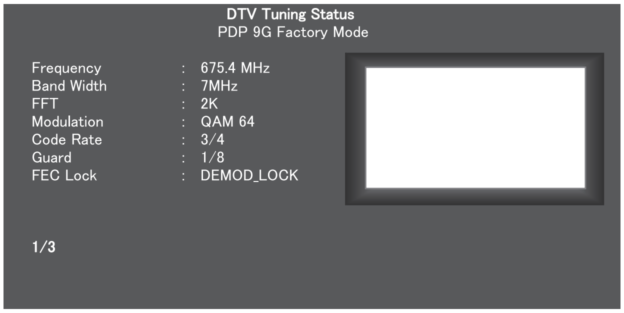
[Checking of the reception environment]
- Is the C/N value affected by a wireless LAN or other ambient electromagnetic waves?
- When the dressing of the RF cable is modified, does the C/N value fluctuate?
- When the RF cable is shortened as much as possible, is the symptom cleared?

If IF_AGC level and C/N value are high enough, block noise is not usually generated.

■ How to Confirm the DTV Tuning Status on the Digital Tuner Service Menu

If block noise is generated, it is necessary to acquire the DTV Tuning Status for the reception frequency of the signal in which block noise is generated. For comparison, it is also necessary to acquire the DTV Tuning Status for another reception frequency of the signal in which block noise is not generated. The DTV Tuning Status page to be acquired is shown below:

DTV Tuning Status (1/3)



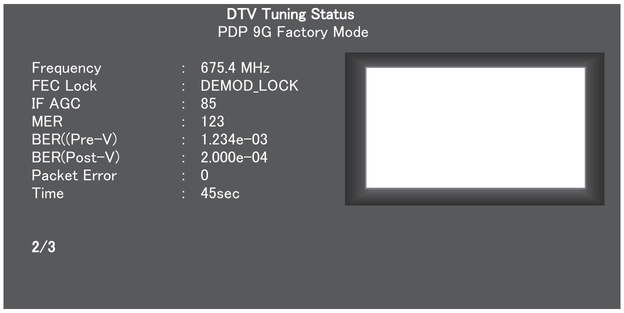
DTV Tuning Status
PDP 9G Factory Mode

Frequency : 675.4 MHz
Band Width : 7MHz
FFT : 2K
Modulation : QAM 64
Code Rate : 3/4
Guard : 1/8
FEC Lock : DEMOD_LOCK

1/3

Frequency : Frequency of the signal currently being received
Band Width : Bandwidth of the signal currently being received
FFT : FFT mode of the signal currently being received (2K or 8K)
Modulation : Modulation method for the signal currently being received
Code Rate : Code Rate of the signal currently being received
Guard : Guard Interval of the signal currently being received
FEC Lock : Current lock status of the receiver. The available lock statuses are as shown below:
DEMOD_LOCK
EFC_LOCK
DRX_LOCK
UNLOCK

DTV Tuning Status (2/3)



DTV Tuning Status
PDP 9G Factory Mode

Frequency : 675.4 MHz
FEC Lock : DEMOD_LOCK
IF AGC : 85
MER : 123
BER((Pre-V) : 1.234e-03
BER(Post-V) : 2.000e-04
Packet Error : 0
Time : 45sec

2/3

BER (Pre-V) : Pre-Viterbi Bit Error Rate of the signal currently being received
BER (Post-V) : Post-Viterbi Bit Error Rate of the signal currently being received. If the value is 2.000E-04, block noise is not caused by a problem in the tuner.
Packet Error : Packet error count of the signal currently being received.
Time : Measured duration of BER (Pre-V), BER (Post-V), or Packet Error. To reset the value to 0 and restart measuring, press the ⬅ or ➡ key on the remote control unit.

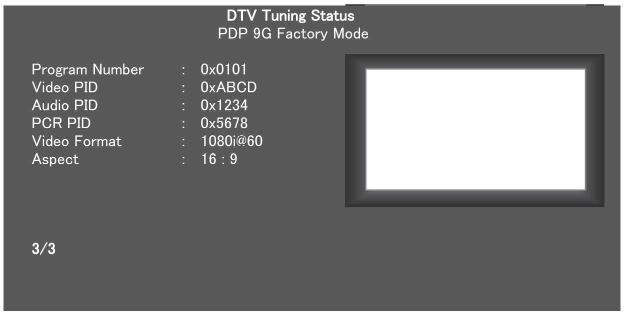
IF AGC : IF AGC level of the signal currently being received.
The AGC-level limits in normal reception are shown below.
Use the following values only as a guide, because they may be affected by the reception environment.

Modulation	Code Rate	Signal-level Limit in Normal Reception
QPSK	1/2	100
	2/3	100
	3/4	100
	5/6	100
	7/8	100
16QAM	1/2	100
	2/3	100
	3/4	100
	5/6	100
	7/8	100
64QAM	1/2	100
	2/3	58
	3/4	56
	5/6	55
	7/8	54

MER : Quality of the signal currently being received.
The signal qualities in normal reception are shown below.
Use the following values only as a guide.

Modulation	Code Rate	MER Limit in Normal Reception
QPSK	1/2	93
	2/3	85
	3/4	67
	5/6	76
	7/8	82
16QAM	1/2	98
	2/3	116
	3/4	127
	5/6	138
	7/8	145
64QAM	1/2	140
	2/3	170
	3/4	184
	5/6	197
	7/8	206

DTV Tuning Status (3/3)



DTV Tuning Status
PDP 9G Factory Mode

Program Number	: 0x0101
Video PID	: 0xABCD
Audio PID	: 0x1234
PCR PID	: 0x5678
Video Format	: 1080i@60
Aspect	: 16 : 9

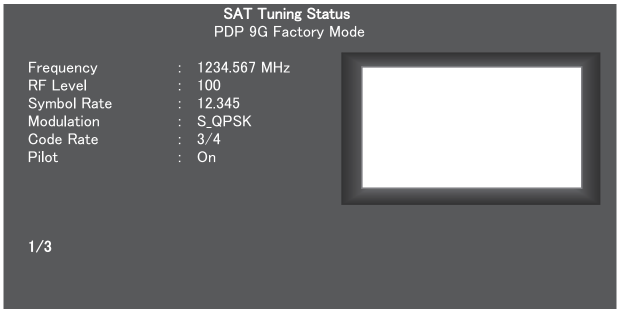
3/3

Program Number	: No. of the program currently being received
Video PID	: Video PID of the program currently being received
Audio PID	: Audio PID of the program currently being received
PCR PID	: PCR PID of the program currently being received
Video Format	: Video Format of the program currently being received
Aspect	: Aspect ratio of the program currently being received

■ How to Confirm the SAT Tuning Status on the Digital Tuner Service Menu

If block noise is generated, it is necessary to acquire the SAT Tuning Status for the reception frequency of the signal in which block noise is generated. For comparison, it is also necessary to acquire the SAT Tuning Status for another reception frequency of the signal in which block noise is not generated. The SAT Tuning Status page to be acquired is shown below:

SAT Tuning Status (1/3)



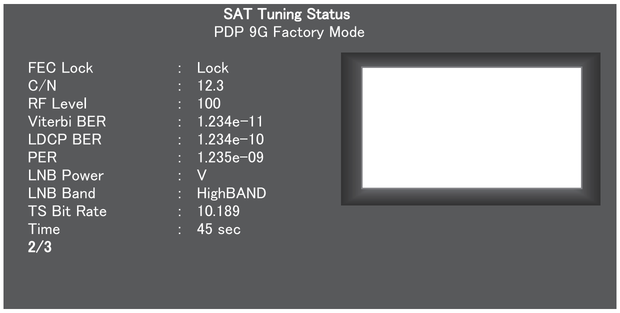
```
SAT Tuning Status
PDP 9G Factory Mode

Frequency     :  1234.567 MHz
RF Level      :  100
Symbol Rate   :  12.345
Modulation    :  S_QPSK
Code Rate     :  3/4
Pilot         :  On

1/3
```

Frequency : Frequency of the signal currently being received
RF Level : Level of the signal currently being received. The signal-level limits in normal reception are shown below. Use the following values only as a guide, because they may be affected by the reception environment.

Modulation	Signal-level Limit in Normal Reception
S2_QPSK	50 to 75
S2_8PSK	50 to 75
S_QPSK	50 to 75

Modulation : Modulation method for the signal currently being received
Symbol Rate : Symbol Rate of the signal currently being received
Code Rate : Code Rate of the signal currently being received
Pilot : On/off status of the Pilot signal currently being received

SAT Tuning Status (2/3)



```
SAT Tuning Status
PDP 9G Factory Mode

FEC Lock      :  Lock
C/N           :  12.3
RF Level      :  100
Viterbi BER   :  1.234e-11
LDCP BER      :  1.234e-10
PER           :  1.235e-09
LNB Power     :  V
LNB Band      :  HighBAND
TS Bit Rate   :  10.189
Time          :  45 sec
2/3
```

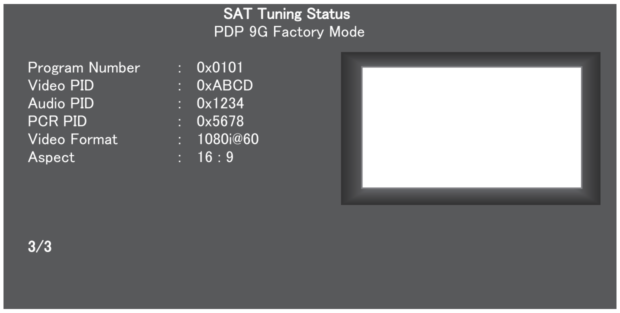
FEC Lock : Current lock/unlock status of the error-correction function of the receiver
C/N : Current reception C/N. The limit C/Ns in normal reception are shown below. Use the following values only as a guide.

Limit C/N in normal reception

Modulation	Code Rate	Limit C/N in Normal Reception	Modulation	Code Rate	Limit C/N in Normal Reception
S2_QPSK	1/2	1.1	S2_8PSK	3/4	8.1
S2_QPSK	3/5	2.4	S2_8PSK	5/6	9.6
S2_QPSK	2/3	3.2	S2_8PSK	8/9	11.0
S2_QPSK	3/4	4.2	S2_8PSK	9/10	11.3
S2_QPSK	4/5	4.8	S_QPSK	1/2	5.2
S2_QPSK	5/6	5.3	S_QPSK	2/3	7.0
S2_QPSK	8/9	6.4	S_QPSK	3/4	8.0
S2_QPSK	9/10	6.6	S_QPSK	5/6	9.1
S2_8PSK	3/5	7.9	S_QPSK	7/8	9.8
S2_8PSK	2/3	8.0			

Viterbi BER : Bit error rate while the S_QPSK signal is being received. While the S2_QPSK or S2_8PSK signal is received, **** is displayed. If the value is 2e-4 or less, block noise is not caused by a problem in the tuner.
LDCP BER : Bit error rate while the S2_QPSK or S2_8PSK signal is being received. While the S_QPSK signal is received, **** is displayed.
PER : Packet error rate during reception. If the value is 0.000e-00, block noise is not caused by a problem in the tuner.
LNB POWER : Voltage currently being supplied to the LNB
LNB BAND : Frequency band that is currently set to the LNB
TS Bit Rate : TS Bit Rate of the signal currently being received
Time : Measured duration of Viterbi BER, LDCP BER, or PER. To reset the value to 0 and restart measuring, press the ⬅ or ➡ key on the remote control unit.

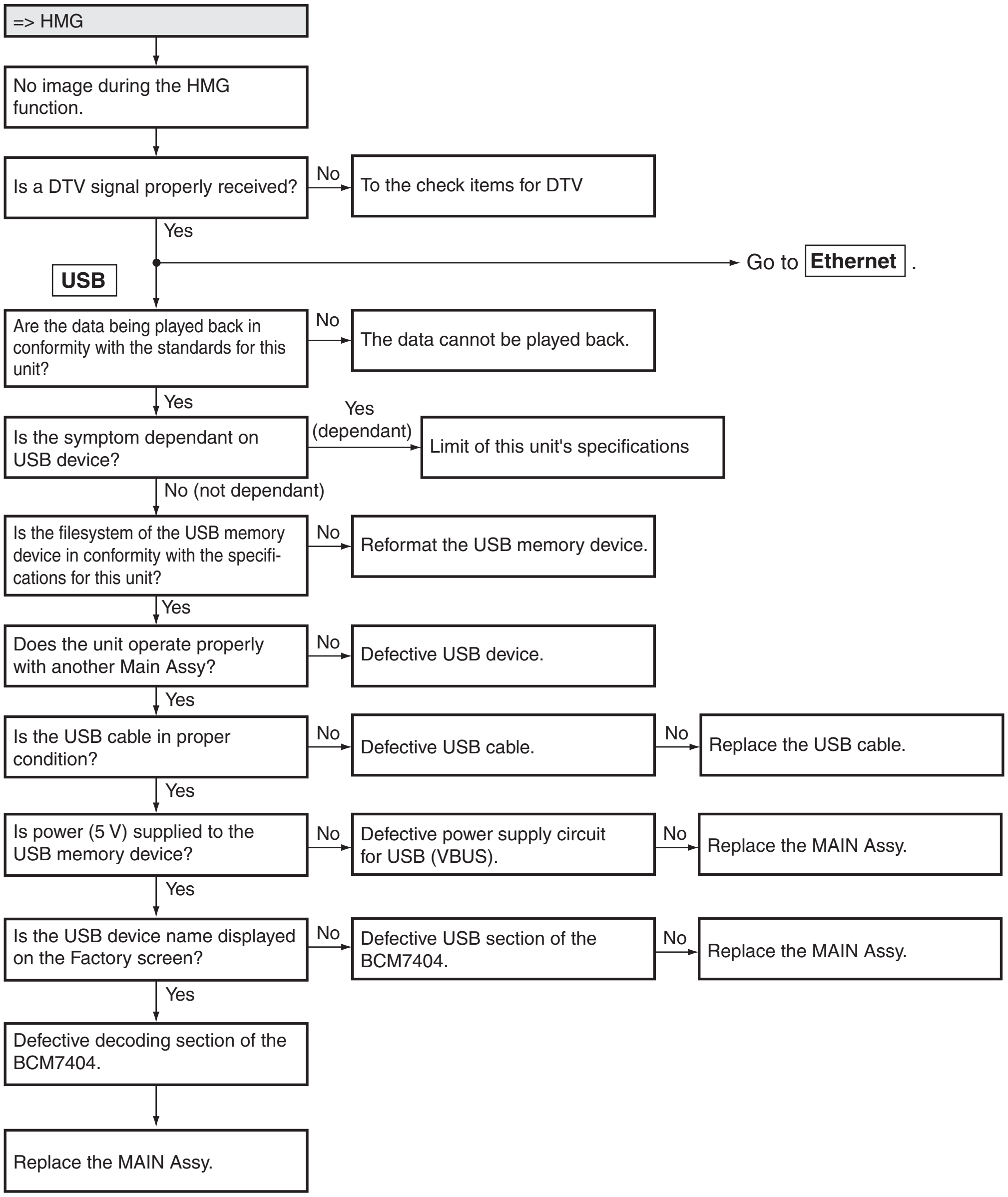
SAT Tuning Status (3/3)

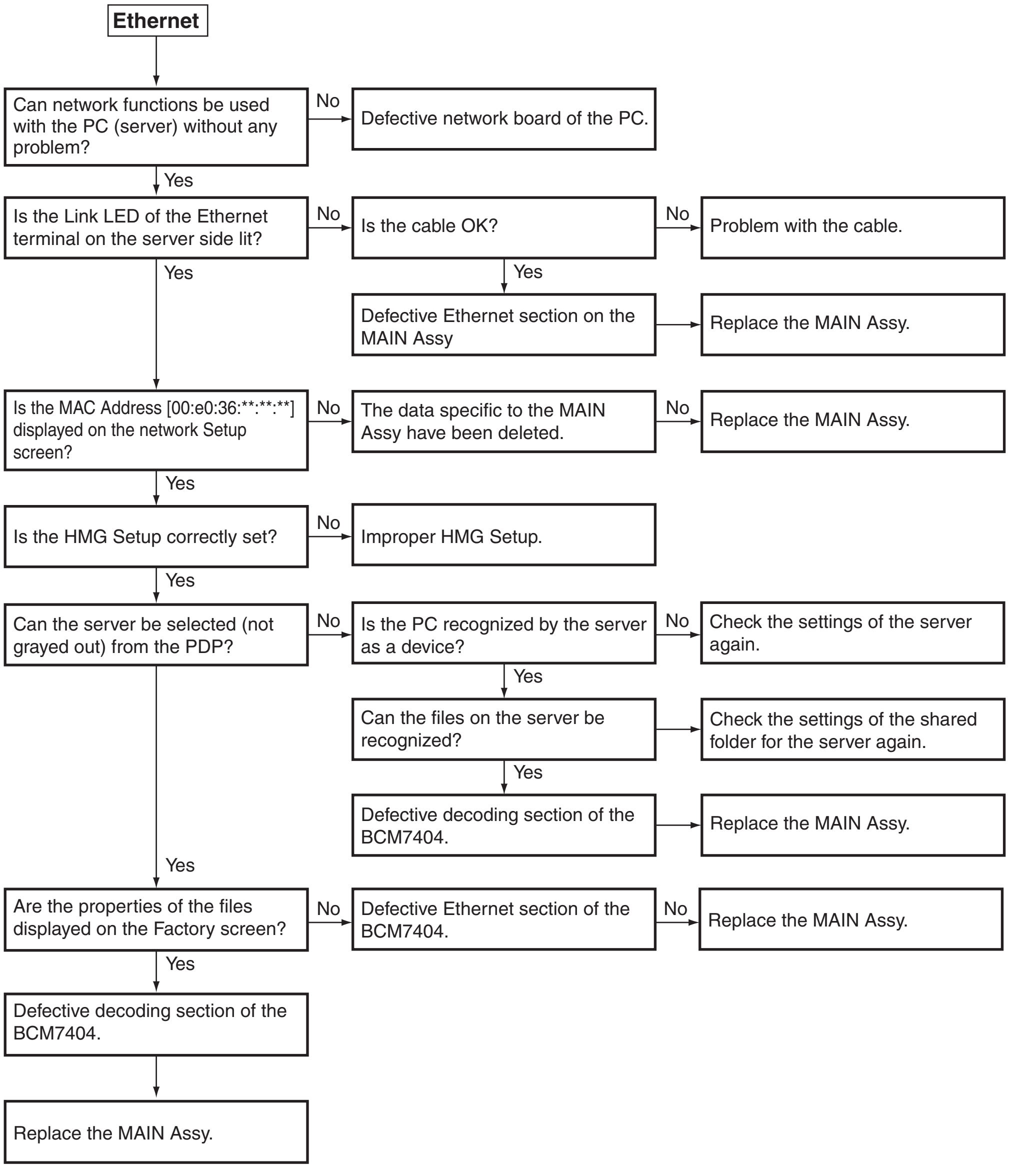


```
SAT Tuning Status
PDP 9G Factory Mode

Program Number  :  0x0101
Video PID       :  0xABCD
Audio PID       :  0x1234
PCR PID         :  0x5678
Video Format    :  1080i@60
Aspect          :  16 : 9

3/3
```

Program Number : No. of the program currently being received
Video PID : Video PID of the program currently being received
Audio PID : Audio PID of the program currently being received
PCR PID : PCR PID of the program currently being received
Video Format : Video Format of the program currently being received
Aspect : Aspect ratio of the program currently being received

Flowchart of Failure Analysis for The HMG


=> HMG
No image during the HMG function.
Is a DTV signal properly received?
No
To the check items for DTV
Yes
Go to Ethernet .
USB
Are the data being played back in conformity with the standards for this unit?
No
The data cannot be played back.
Yes
Is the symptom dependant on USB device?
Yes (dependant)
Limit of this unit's specifications
No (not dependant)
Is the filesystem of the USB memory device in conformity with the specifications for this unit?
No
Reformat the USB memory device.
Yes
Does the unit operate properly with another Main Assy?
No
Defective USB device.
Yes
Is the USB cable in proper condition?
No
Defective USB cable.
No
Replace the USB cable.
Yes
Is power (5 V) supplied to the USB memory device?
No
Defective power supply circuit for USB (VBUS).
No
Replace the MAIN Assy.
Yes
Is the USB device name displayed on the Factory screen?
No
Defective USB section of the BCM7404.
No
Replace the MAIN Assy.
Yes
Defective decoding section of the BCM7404.
Replace the MAIN Assy.


Ethernet
Can network functions be used with the PC (server) without any problem?
No
Defective network board of the PC.
Yes
Is the Link LED of the Ethernet terminal on the server side lit?
No
Is the cable OK?
No
Problem with the cable.
Yes
Defective Ethernet section on the MAIN Assy
Replace the MAIN Assy.
Yes
Is the MAC Address [00:e0:36:**:**:**] displayed on the network Setup screen?
No
The data specific to the MAIN Assy have been deleted.
No
Replace the MAIN Assy.
Yes
Is the HMG Setup correctly set?
No
Improper HMG Setup.
Yes
Can the server be selected (not grayed out) from the PDP?
No
Is the PC recognized by the server as a device?
No
Check the settings of the server again.
Yes
Can the files on the server be recognized?
Check the settings of the shared folder for the server again.
Yes
Defective decoding section of the BCM7404.
Replace the MAIN Assy.
Yes
Are the properties of the files displayed on the Factory screen?
No
Defective Ethernet section of the BCM7404.
No
Replace the MAIN Assy.
Yes
Defective decoding section of the BCM7404.
Replace the MAIN Assy.

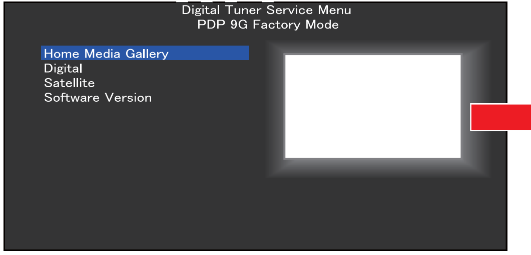
[HMG] How to enter DTB Service menu

Note: Use the remote control unit that supports Factory mode, because the DTB Service menu is accessible from Factory mode.

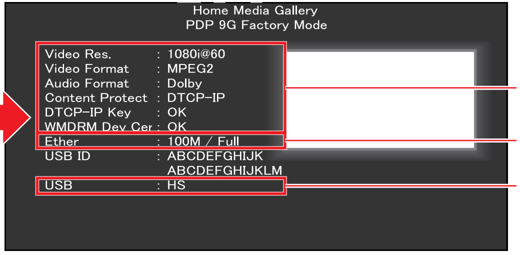
Step 1: Press the Factory key on the remote control unit to display the INFORMATION screen of Factory mode.
Step 2: Press the Mute key on the remote control unit 3 times to display the INITIALIZE screen.
Step 3: Press the ⬇ key on the remote control unit twice to display the “DTB SERVICE MODE (+)” indication at the bottom of the screen.
Step 4: Press the ENTER/SET key on the remote control unit to display the “MODE SHIFT <=>: No” indication at the bottom of the screen.
Step 5: Press the ⬅ or ➡ key on the remote control unit until the “MODE SHIFT <=>: YES” indication is displayed at the bottom of the screen.
Step 6: Press and hold the ENTER/SET key on the remote control unit pressed for 5 seconds or more to activate DTB Service menu.

The Home Media Gallery (HMG) Service menu is indicated below:

Top page of DTB Service menu


Digital Tuner Service Menu
PDP 9G Factory Mode
Home Media Gallery
Digital
Satellite
Software Version

Home Media Gallery Service menu


Home Media Gallery
PDP 9G Factory Mode

Video Res. : 1080i@60
Video Format : MPEG2
Audio Format : Dolby
Content Protect : DTCP–IP
DTCP–IP Key : OK
WMDRM Dev Cer : OK
Ether : 100M / Full
USB ID : ABCDEFGHIJK
ABCDEFGHIJKLM
USB : HS

Content data
Ethernet connection data
USB device data

3.2 DIGITAL TUNER SERVICE MENU

The Digital Tuner Service Menu is provided for collecting data for technological examination when the Digital Tuner has any problem in the market. This menu is introduced here just for reference.

[1] REMOTE CONTROL CODE IN DIGITAL TUNER SERVICE MENU

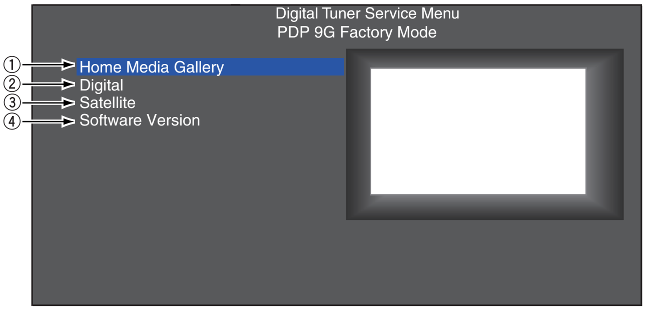
The following remote control cord is valid in the Digital Tuner Service Menu.

Remote Control Keys	Basic Functions	Remarks
⬇ (DOWN)	Selecting the menu items and shifting the pages.	Shifting downward to the next item. Moving to the next lower page.
⬆ (UP)		Shifting upward to the next item. Moving to the next upper page.
⬅ (LEFT)	Selecting the setting value.	Modifying the setting of selected items.
➡ (RIGHT)		
ENTER/SET	Shifting the menu layers	Shifting to the next menu screen.
RETURN		Shifting to the previous menu screen.
Numeric Keys	Numeric input	Input the numerical value.
POWER OFF	Power OFF	Turning the power off.
STANDBY/ON		
FACTORY	Factory ON/OFF	Release the Menu, then enter the Service Factory menu.
EXIT	MENU exit	After you exit the menu, the channel that was selected on the menu will be displayed.
MUTING	Muting	
HOME MENU	HOME MENU ON/OFF	

[2] HIERARCHICAL TABLE OF DIGITAL TUNER SERVICE MENU

Item	Large Item	Middle Item	Remarks
6.3 [3] Digital Tuner Service Menu			
	6.3 [4] HMG Service Menu		
			Exclusively used for technical analysis: HomeMediaGallery-related information indication
	6.3 [5] Digital		
		Bandwidth	Exclusively used for technical analysis
		Frequency	Exclusively used for technical analysis
		Program Number	Exclusively used for technical analysis
		Audio PID	Exclusively used for technical analysis
		DTV Tuning Status	Exclusively used for technical analysis: Terrestrial digital broadcasting-related information indication
	6.3 [6] Satellite		
		Modulation	Exclusively used for technical analysis
		Frequency	Exclusively used for technical analysis
		Symbol Rate	Exclusively used for technical analysis
		LNB POWER	Exclusively used for technical analysis
		LNB BAND	Exclusively used for technical analysis
		Program Number	Exclusively used for technical analysis
		Audio PID	Exclusively used for technical analysis
		SAT Tuning Status	Exclusively used for technical analysis: Satellite digital broadcasting-related information indication
	6.3 [7] Software Version		
			Exclusively used for technical analysis: The software revision information that consists of it in DTB software

[3] DIGITAL TUNER SERVICE MENU SCREEN


Digital Tuner Service Menu
PDP 9G Factory Mode

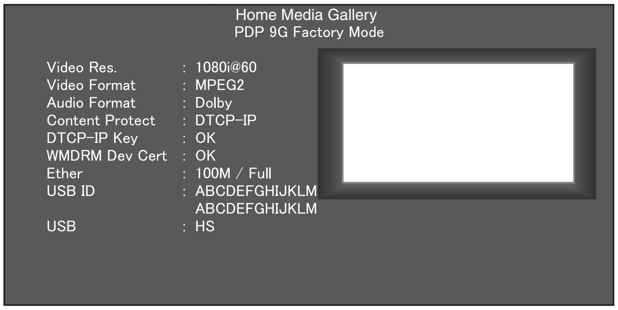
① Home Media Gallery
② Digital
③ Satellite
④ Software Version

Fig.1 Digital Tuner Service Menu screen

Display a large item list of Digital Tuner Service Menu.
Select each item, and shift to each setting / information display screen.

① HomeMediaGallary-related information indication
② Terrestrial digital-related setting / information indication
③ Satellite digital-related setting / information indication
④ Digital Tuner-related detailed software version indication

[4] HOME MEDIA GALLERY SCREEN

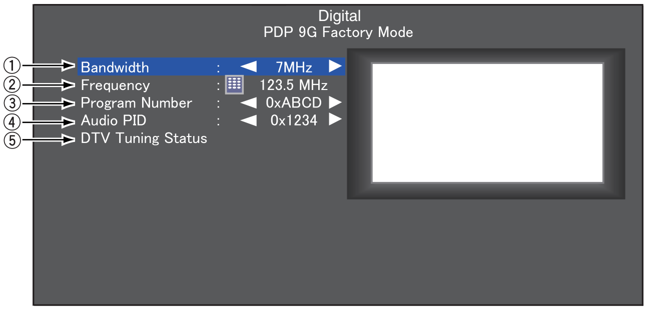

Home Media Gallery
PDP 9G Factory Mode

Video Res. : 1080i@60
Video Format : MPEG2
Audio Format : Dolby
Content Protect : DTCP-IP
DTCP-IP Key : OK
WMDRM Dev Cert : OK
Ether : 100M / Full
USB ID : ABCDEFGHIJKLM ABCDEFGHIJKLM
USB : HS

Fig.2 Home Media Gallery screen

Display the HomeMediaGallary-related information.

[5] DIGITAL SCREEN


Digital
PDP 9G Factory Mode

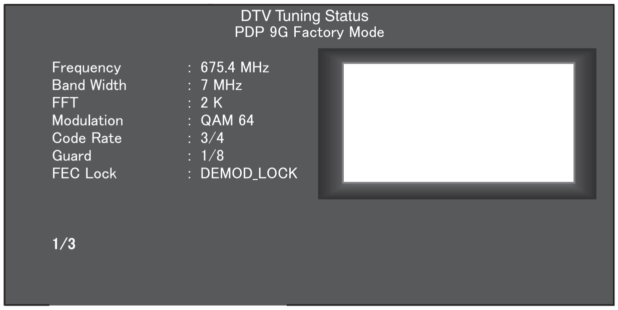
① Bandwidth : ◀ 7MHz ▶
② Frequency : 123.5 MHz
③ Program Number : ◀ 0xABCD ▶
④ Audio PID : ◀ 0x1234 ▶
⑤ DTV Tuning Status

Fig.3 Digital screen

Display the Digital broadcasting-related setting / information indication.(except the satellite digital)

① The Bandwidth for receiving a digital broadcast can be selected. (7MHz/8MHz)
② The frequency can be set (up to 1 digit after the decimal point).
③ Program Number in the same stream: Service ID can be selected.
④ Audio PID in the same stream: Audio PID can be selected.
⑤ The DTV Tuning Status is displayed.

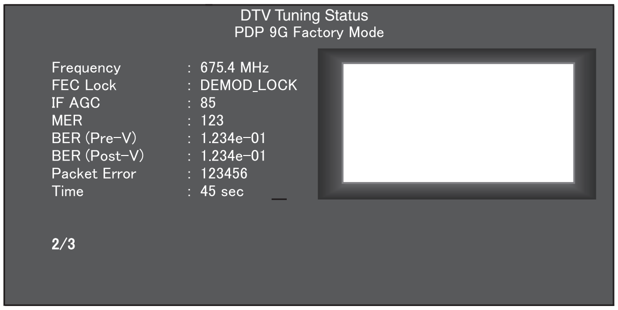
The data displayed on the DTV Tuning Status screen are as shown below:
The instructions for servicing using this screen is shown in "Details on how to confirm the factory DTV tuning status" of section 5.2 [6].
Therefore, this screen is introduced here just for reference.


DTV Tuning Status
PDP 9G Factory Mode

Frequency : 675.4 MHz
Band Width : 7 MHz
FFT : 2 K
Modulation : QAM 64
Code Rate : 3/4
Guard : 1/8
FEC Lock : DEMOD_LOCK

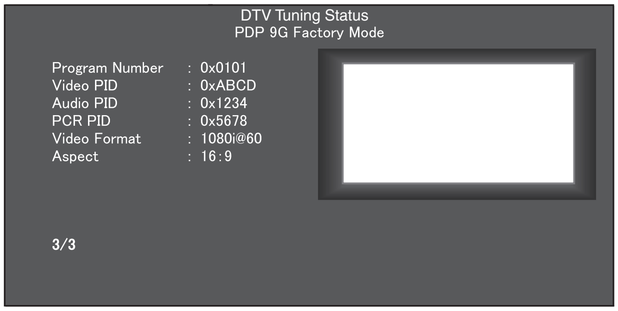
1/3

Fig.4 DTV Tuning Status (1/3) screen



```
DTV Tuning Status
PDP 9G Factory Mode

Frequency      : 675.4 MHz
FEC Lock       : DEMOD_LOCK
IF AGC         : 85
MER            : 123
BER (Pre-V)    : 1.234e-01
BER (Post-V)   : 1.234e-01
Packet Error   : 123456
Time           : 45 sec

2/3
```

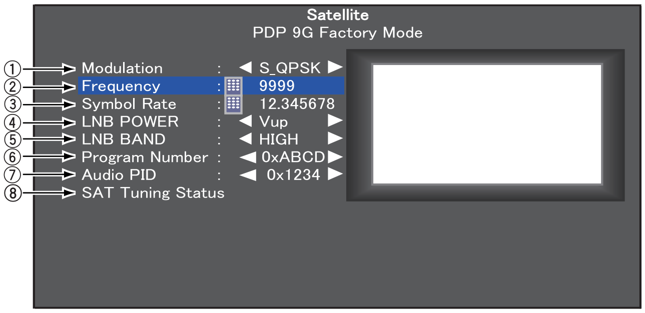
Fig.5 DTV Tuning Status screen (2/3) screen



```
DTV Tuning Status
PDP 9G Factory Mode

Program Number : 0x0101
Video PID      : 0xABCD
Audio PID      : 0x1234
PCR PID        : 0x5678
Video Format   : 1080i@60
Aspect         : 16:9

3/3
```

Fig.6 DTV Tuning Status screen (3/3) screen

[6] SATELLITE SCREEN



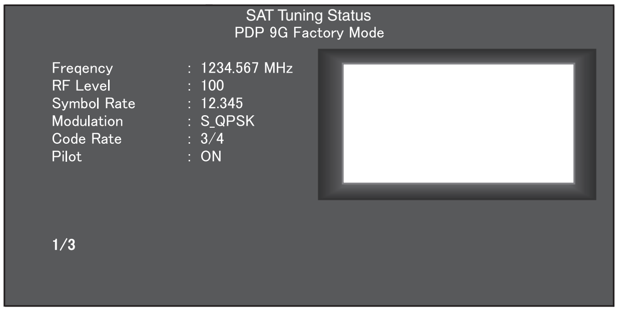
```
Satellite
PDP 9G Factory Mode

①  Modulation     :  ◀ S_QPSK ▶
②  Frequency      :    9999
③  Symbol Rate    :    12.345678
④  LNB POWER      :  ◀ Vup    ▶
⑤  LNB BAND       :  ◀ HIGH   ▶
⑥  Program Number :  ◀ 0xABCD ▶
⑦  Audio PID      :  ◀ 0x1234 ▶
⑧  SAT Tuning Status
```

Fig.7 Satellite screen

Display the Satellite Digital broadcasting-related setting / information indication.

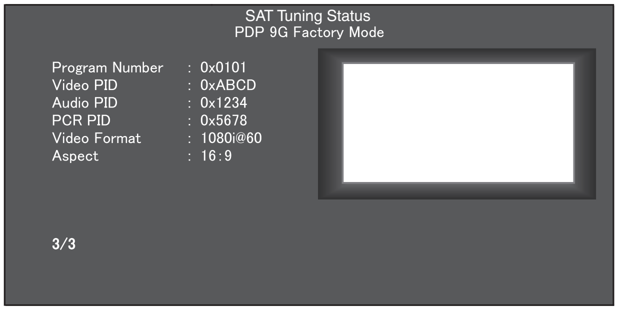
① The modulation method can be selected.
(S_QPSK/S2_QPSK/S2_8PSK)
② The frequency can be set (0001 to 9999).
③ The symbol Rate can be set (1.000000 to 99.999999)
④ The LNB power voltage can be selected. (OFF/V/H/Vup/Hup)
⑤ The LNB Bandwidth can be selected. (Low/High)
⑥ Program Number in the same stream: Service ID can be selected.
⑦ Audio PID in the same stream: Audio PID can be selected.
⑧ The Tuning Status of Satellite Digital is displayed.

The data displayed on the SAT Tuning Status screen are as shown below:
The instructions for servicing using this screen will be provided as service information.
Therefore, this screen is introduced here just for reference.



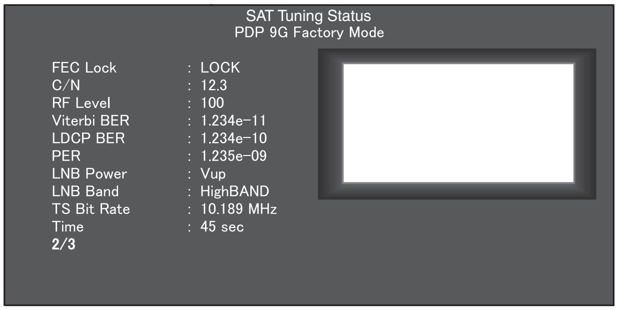
```
SAT Tuning Status
PDP 9G Factory Mode

Freqency       : 1234.567 MHz
RF Level       : 100
Symbol Rate    : 12.345
Modulation     : S_QPSK
Code Rate      : 3/4
Pilot          : ON

1/3
```

Fig.8 SAT Tunig Status (1/3) screen



```
SAT Tuning Status
PDP 9G Factory Mode

Program Number : 0x0101
Video PID      : 0xABCD
Audio PID      : 0x1234
PCR PID        : 0x5678
Video Format   : 1080i@60
Aspect         : 16:9

3/3
```

Fig.10 SAT Tunig Status (3/3) screen



```
SAT Tuning Status
PDP 9G Factory Mode

FEC Lock       : LOCK
C/N            : 12.3
RF Level       : 100
Viterbi BER    : 1.234e-11
LDCP BER       : 1.234e-10
PER            : 1.235e-09
LNB Power      : Vup
LNB Band       : HighBAND
TS Bit Rate    : 10.189 MHz
Time           : 45 sec
2/3
```

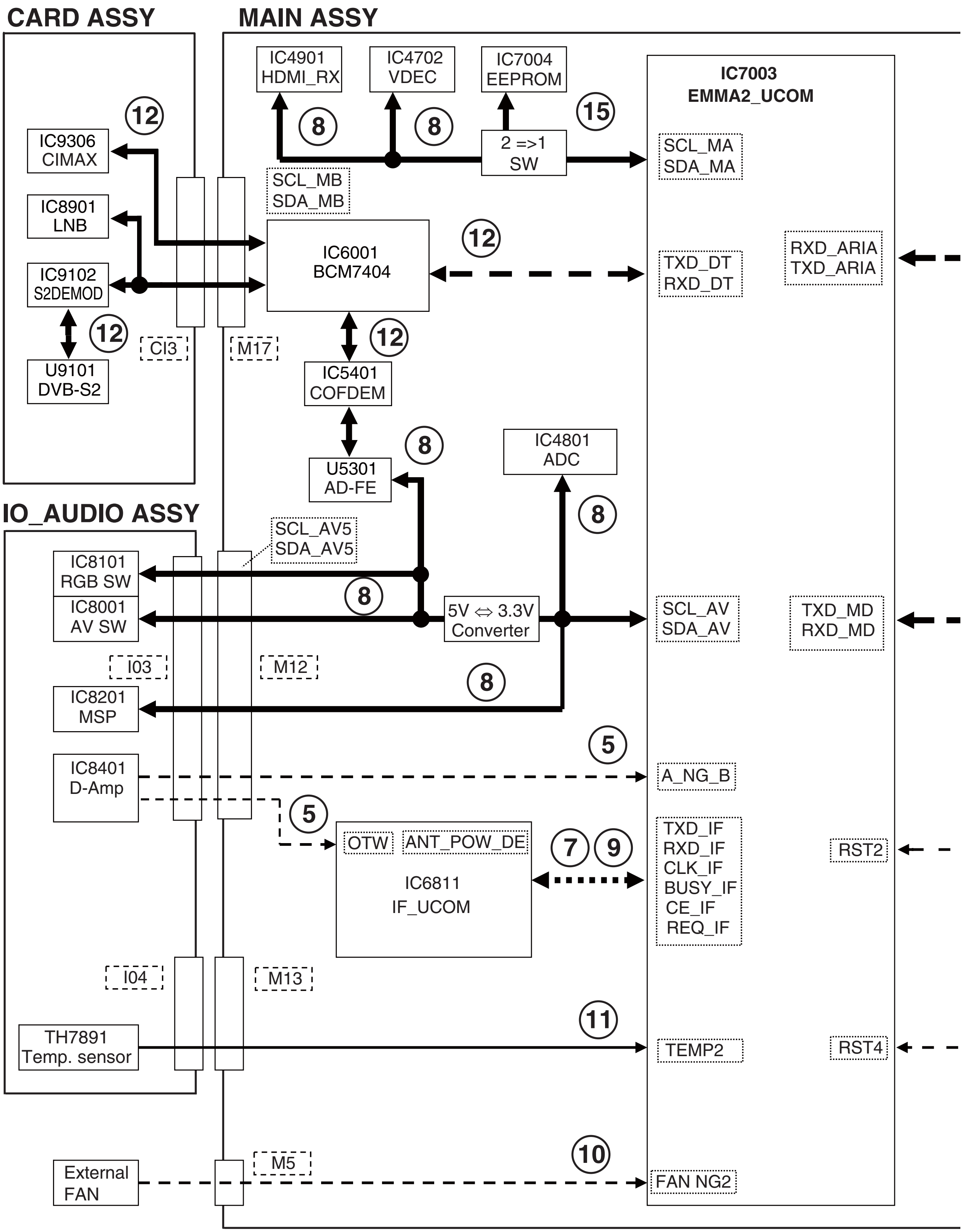
Fig.9 SAT Tunig Status (2/3) screen

[7] SOFTWARE VERSION SCREEN

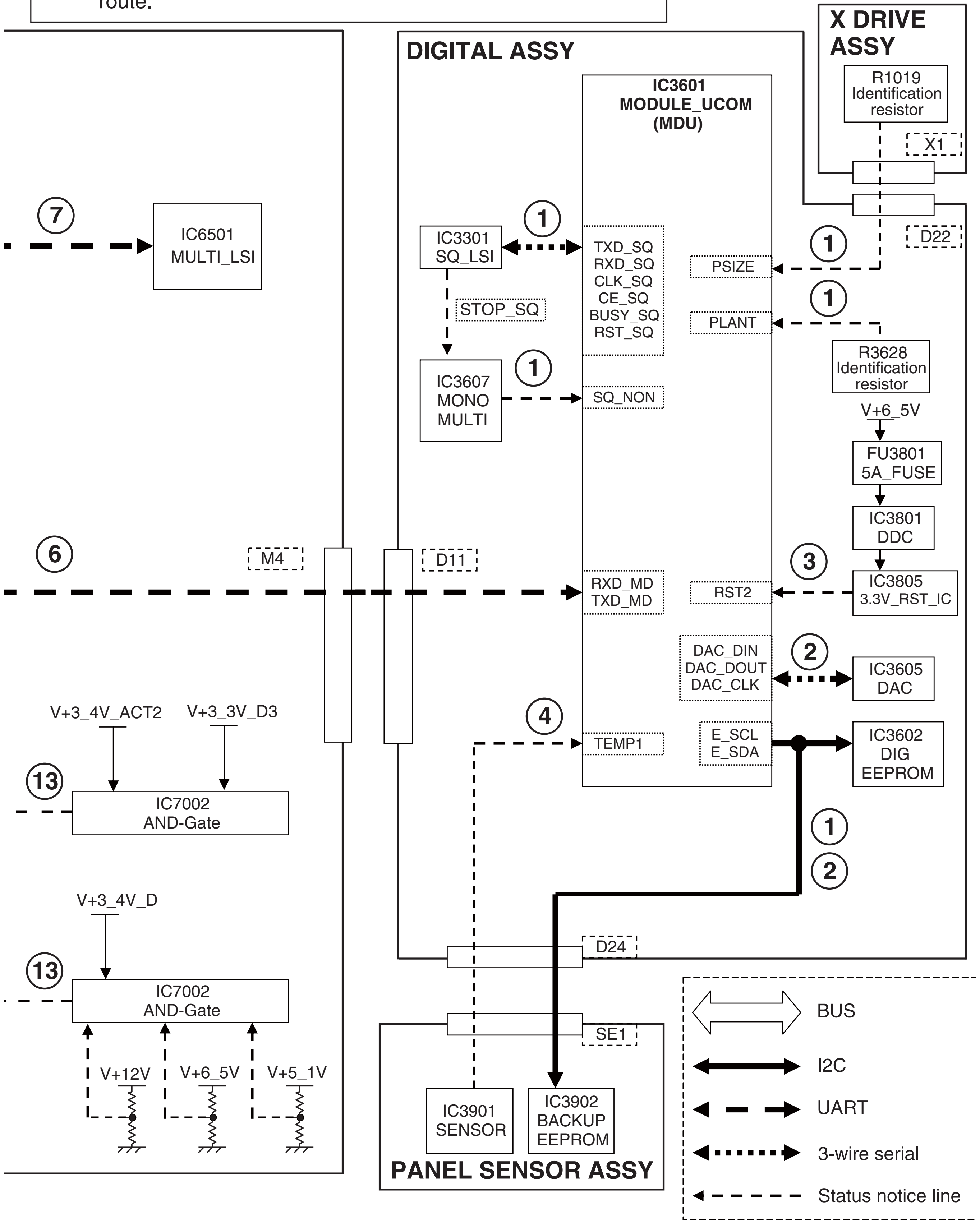
The details are not described here, as this is provided for technical examination.

3.3 DIAGNOSIS OF SD (SHUTDOWN)

[1] BLOCK DIAGRAM OF THE SHUTDOWN SIGNAL


CARD ASSY
MAIN ASSY
IO_AUDIO ASSY
IC4901
HDMI_RX
IC4702
VDEC
IC7004
EEPROM
IC7003
EMMA2_UCOM
2 =>1
SW
⑧
⑧
⑮
SCL_MA
SDA_MA
SCL_MB
SDA_MB
⑫
IC9306
CIMAX
IC8901
LNB
IC9102
S2DEMOD
U9101
DVB-S2
⑫
CI3
M17
IC6001
BCM7404
⑫
TXD_DT
RXD_DT
RXD_ARIA
TXD_ARIA
⑫
IC5401
COFDEM
U5301
AD-FE
⑧
IC4801
ADC
⑧
SCL_AV5
SDA_AV5
IC8101
RGB SW
IC8001
AV SW
⑧
5V ⇔ 3.3V
Converter
SCL_AV
SDA_AV
TXD_MD
RXD_MD
I03
M12
⑧
IC8201
MSP
⑤
IC8401
D-Amp
A_NG_B
⑤
OTW
ANT_POW_DE
IC6811
IF_UCOM
⑦ ⑨
TXD_IF
RXD_IF
CLK_IF
BUSY_IF
CE_IF
REQ_IF
RST2
I04
M13
⑪
TH7891
Temp. sensor
TEMP2
RST4
M5
⑩
External
FAN
FAN NG2

Note : The figures ① to ⑮ indicate the number of times the Blue LED flashes when shut-down occurs in the corresponding route.



X DRIVE ASSY
R1019
Identification resistor
X1
DIGITAL ASSY
IC3601
MODULE_UCOM
(MDU)
D22
⑦
IC6501
MULTI_LSI
①
IC3301
SQ_LSI
TXD_SQ
RXD_SQ
CLK_SQ
CE_SQ
BUSY_SQ
RST_SQ
①
PSIZE
①
PLANT
STOP_SQ
R3628
Identification resistor
①
IC3607
MONO
MULTI
SQ_NON
V+6_5V
FU3801
5A_FUSE
IC3801
DDC
⑥
M4
D11
③
RXD_MD
TXD_MD
RST2
IC3805
3.3V_RST_IC
DAC_DIN
DAC_DOUT
DAC_CLK
②
IC3605
DAC
V+3_4V_ACT2
V+3_3V_D3
④
TEMP1
E_SCL
E_SDA
IC3602
DIG
EEPROM
⑬
IC7002
AND-Gate
①
②
V+3_4V_D
D24
⑬
IC7002
AND-Gate
SE1
V+12V
V+6_5V
V+5_1V
IC3901
SENSOR
IC3902
BACKUP
EEPROM
PANEL SENSOR ASSY
BUS
I2C
UART
3-wire serial
Status notice line

[2] SD (SHUTDOWN) DIAGNOSIS

Frequency of LED Flashing (*1)		Major Type	Detailed Type	Log Indication in Factory Mode	
				MAIN	SUB
Blue 1	Orange 1	Abnormality in the Sequence LSI	Communication error	SQ-LSI	RTRY
	Orange 2		Drive stop		SQNO
	Orange 3		Busy		BUSY
	Orange 4		Version mismatching (hardware, software)		VER-HS
	Orange 5		Version mismatching (hardware, backup memory)		VER-HM
	Orange 6		Version mismatching (hardware, DIGITAL memory)		VER-HI
Blue 2	Orange 1	Failure in MDU device communication	Digital EEPROM	MD-DEV	EEPROM
	Orange 2		Backup EEPROM		BACKUP
	Orange 3		DAC IC		DAC
Blue 3	–	Abnormality in RST2 power decrease	–	RST2	–
Blue 4	Orange 1	Abnormality in panel temperature	Abnormality in high temperature	TMP-NG	TMP-H
	Orange 2		Abnormality in low temperature		TMP-L
Blue 5	Orange 1	Short-circuiting of the speakers D-AMP temperature abnormality	–	AUDIO	–
	Orange 2				OTW
Blue 6	–	Failure in communication with the module microcomputer	–	MODULE	–
Blue 7	Orange 1	Failure in IF microcomputer 3-wire serial communication	IF microcomputer	MA-3L	IF
	Orange 2		MULTI		MULTI
Blue 8	Orange 1	Failure in IIC communication with the main microcomputer	Tuner 1	MA-IIC	FE1
	Orange 2		MSP/MAP		MSPMAP
	Orange 3		AV switch		AV-SW
	Orange 4		RGB switch		RGB-SW
	Orange 5		Main VDEC		VDEC
	Orange 6		VDEC SDRAM		SDRAM
	Orange 7		AD/PLL		ADC
	Orange 8		HDMI		HDMI
Blue 9	–	Failure in communication with the main microcomputer	–	MAIN	–
Blue 10	Orange 2	Abnormality in FAN	FAN2	FAN	FAN2
Blue 11	–	High temperature of the unit	–	TEMP2	–
Blue 12	Orange 1	Digital Tuner	DTV startup error	DTUNER	PS/RST
	Orange 2		DTV communication error		RETRY
	Orange 3		DEVICE error		DEVICE
	Orange 7		Tuner 1		DE-FE
	Orange 18		Application		DTVAPP
	Orange 19		COFDEM		DEMOD
	Orange 20		Tuner S2		DE-FES
	Orange 21		S2DEMOD		DEMODS
	Orange 22		LNB		DE-LNB
Blue 13	Orange 1	Failure in the power supply	DC-DC Converter power decrease	RST-MA	M-DCDC
	Orange 2		POWER SUPPLY		RELAY
Blue 15	–	Main EEPROM	Main EEPROM communication error	MA-EEP	–
–	–		DTV Antenna	DTUNER	D-ANT
–	–		Satellite Antenna	DTUNER	S-ANT

*1: If the DISPLAY key is pressed during shutdown (the blue LED is flashing), flashing of the orange LED, which indicates the subcategory, can be confirmed.
The blue LED remains flashing. Pressing the DISPLAY key again will make the orange LED go dark.

Checkpoint	Possible Defective Part	Remarks
Communication line between MDU and SQ_LSI	IC3601/IC3301	SQ_IC communication not established. IC3301 may not have properly started up.
Drive detectig signal of MDU (SQ_NON)	CN3201/IC3601/ IC3301/IC3607	A shutdown occurs if the drive waveform periodically does not output. (When SQ_NON of MDU input is High, a shutdown is generated.)
Communication line between MDU and SQ_LSI (BUSY_SQ)	IC3601/IC3301	If BUSY_SQ remains high, a shutdown is generated.
Check the DIGITAL Assy and the software version of SEQ and the destination of the panel. Check the connection between [X1] and [D22].	IC3601/IC3301	When the identification resistor of PSIZE/PLANT and software version of SEQ are incoherent, a shutdown occurs.
Check the DIGITAL Assy and the software version of SEQ and the destination of the panel. Check the connections between [X1] and [D22], and [SE1] and [D24]. Communication line between MDU and BACKUP EEPROM	IC3601/ SENSOR Assy(IC3902)	When the identification resistor of PSIZE/PLANT and stored content of EEPROM on the SENSOR Assy are incoherent, a shutdown occurs.
Check the DIGITAL Assy and the software version of SEQ and the destination of the panel. Check the connections between [X1] and [D22]. Communication line between MDU and DIG EEPROM	IC3601/IC3602	When the identification resistor of PSIZE/PLANT and stored content of EEPROM on the DIGITAL Assy are incoherent, a shutdown occurs.
Communication line between MDU and DIG EEPROM	IC3601/IC3602	
Communication line between MDU and BACKUP EEPROM	IC3601/SENSOR Assy(IC3902)	
Communication line between MDU and DAC	IC3601/IC3605	
3.3 V output (TP3881) of DDC	IC3801/IC3805	If RST2 does not become high after the unit is turned on, a shutdown will be generated in several seconds.
V+6.5V of POWER SUPPLY Unit (Check [D25][P4]) FU3801 has melted.	POWER SUPPLY Unit, FU3801	Check if V + 6_5 V is started. Also check if the FU3801 on the DIGITAL Assy has been melted.
Installation environment	SENSOR Assy (IC3901)	If TEMP1 that is read by the module microcomputer is 85 °C or higher, a shutdown will be generated.
Installation environment Check the connection between SE1 and D24.	SENSOR Assy (IC3901)	A shutdown occurs if the reading of TEMP1 detected by the module microcomputer is –20 °C or less. Also check the connection between SE1 and D24.
Speaker terminals	JA8551	Check if any speaker cable is in contact with the chassis.
D_AMP	IC8401	Check if the AMP output is short-circuited.
Periphery of the cable between IO3 and M12, and IO4 and M13	CN7503,CN7504, CN4003,CN4004	Check if cables are firmly connected.
D_A, MP	IC8401	Check the temperature that is 125 °C or more.
Communication line between MAIN and MOD	IC7003	Check the communication lines (TXD_MOD/RXD_MOD).
Periphery of the cable between D11 and M12	CN4101,CN4105	Check if cables are firmly connected.
Communication line between IF and MAIN	IC7003,IC6501	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF).
Communication line between MULTI and MAIN	IC7003,IC6501	Check the communication lines (TXD_ARIA/RXD_ARIA).
IIC communication line between Tuner and MAIN	U5301,IC7003	Check the communication lines (SCL_TU/SDA_TU or SCL_AV/SDA_AV).
IIC communication line between MSP/MAP and MAIN	IC8201,IC7003	Check the communication lines (SCL_AV/SDA_AV).
IIC communication line between AV-SW and MAIN	IC8001,IC7003	Check the communication lines (SCL_AV5/SDA_AV5).
IIC communication line between RGB_SW and MAIN	IC8101,IC7003	Check the communication lines (SCL_AV5/SDA_AV5).
IIC communication line between M_VDEC and MAIN	IC4702,IC7003	Check the communication lines (SCL_MB/SDA_MB).
IIC communication line between VDEC and SDRAM	IC4702,IC4802	Check the communication lines (SDRAM). Defective SDRAM
IIC communication line between ADC and MAIN	IC4801,IC7003	Check the communication lines (SCL_AV/SDA_AV).
IIC communication line between HDMI_RX and MAIN	IC4901,IC7003	Check the communication lines (SCL_MB/SDA_MB).
Communication line between IF and MAIN	IC6811,IC7003	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF).
Dirt attached to the fan motor		Check the fan. (SD10 does not detect it at the temperature that fans do not turn.)
Periphery of the FAN CONNECT Assy		FAN NG
Periphery of the cable between FA1 and FA3		Check if cables are firmly connected.
Periphery of the fan control regulator	IC4303	Check that the voltage outputs it.
Ambient temperature		TEMP2 A shutdown occurs because of high temperature.
Temperature sensor or its periphery	TH7891	TEMP2
Periphery of the cable between IO4 and M13	CN7504,CN4004	Check if cables are firmly connected.
Startup of BCM7404	IC6001	Check the startup of the BCM7404 and the communication line with MAIN.
Communication line between BCM7404 and MAIN	IC6001	Check the startup of the BCM7404 and the communication line with MAIN.
Periphery of the BCM7404	IC6001	
Front-end block	IC6001,U5301	Check the BCM7404 and periphery circuit.
DTV application	IC6001	
COFDEM	IC5401	Check the communication line between BCM7404 and COFDEM.
Tuner S2	U9101	Check the communication line between COFDEM and F.E..
S2DEMOD	IC9102	Check the communication line between BCM7404 and S2DEMOD.
LNB	IC8901	Check the communication line between BCM7404 and LNB.
RST2 V+3_4V_ACT2, V+3_3V_D3	IC7002	Check if each voltages are started.
RST4 V+12V, V+6_5V, V+5_1V, V+3_4V_D	IC7002	Check if each voltages are started.
RST4 V+12V, V+6_5V, V+5_1V, V+3_4V_D	POWER SUPPLY Unit	Check if each voltages are started.
Check the cables M2 and M3.	CN4207, CN4210	Check if cables are firmly connected.
IIC communication line between EEPROM and MAIN	IC7004, IC7003	Check the communcation lines (SCL_EP/SDA_EP)
DTV Antenna supply power	IC4304	Check the IC4304 and periphery device.
Satellite Antenna supply power	IC8901	Check the IC8901 and periphery device. (This Log is correspondence to the running change.)

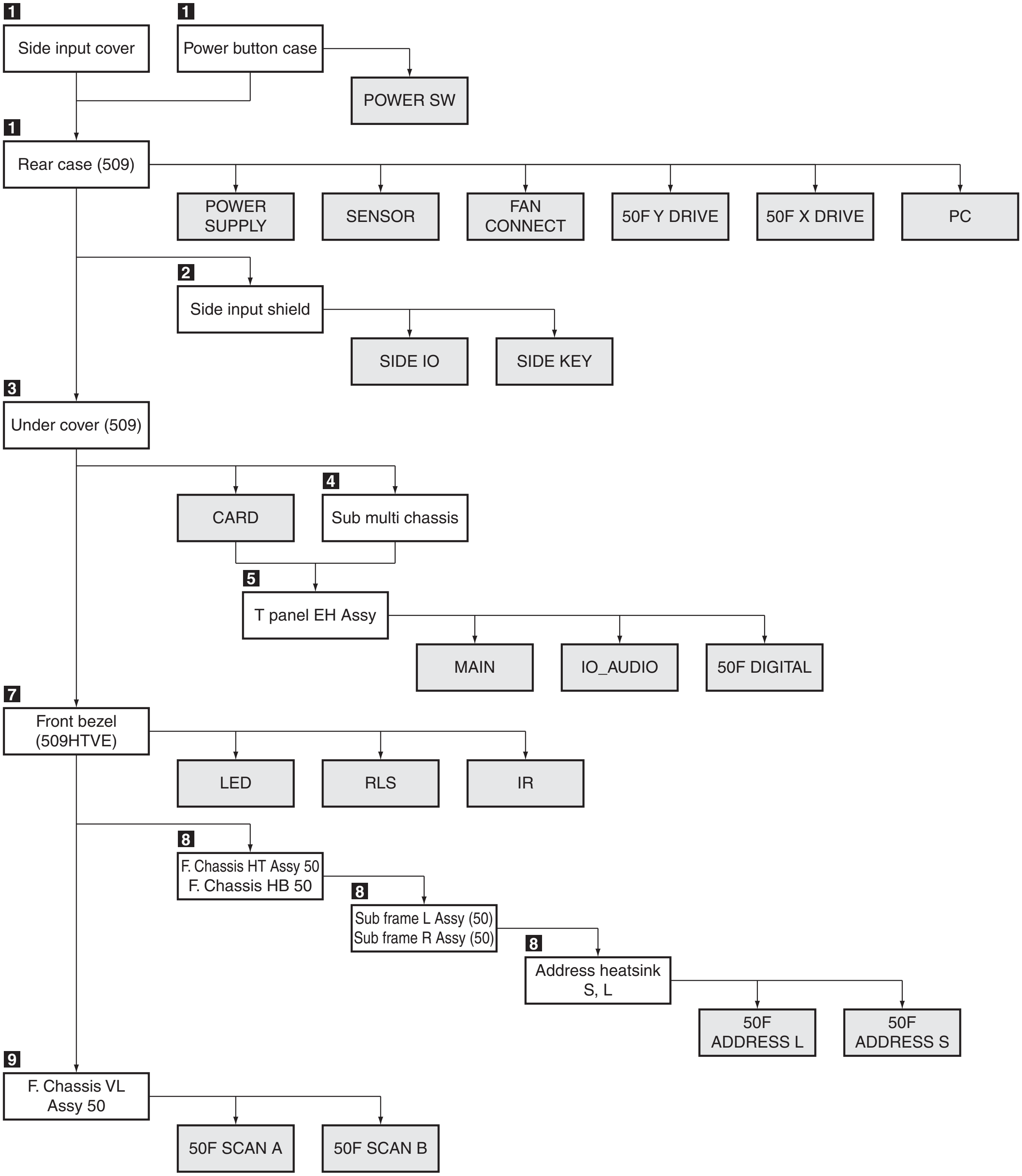
4. DISASSEMBLY

4.1 FLOWCHART OF REMOVAL ORDER

Note: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Flowchart of removal order for the main parts and boards

It is efficient to proceed with removal of the main parts and boards in the order shown in the chart below:


1
Side input cover
1
Power button case
POWER SW
1
Rear case (509)
POWER SUPPLY
SENSOR
FAN CONNECT
50F Y DRIVE
50F X DRIVE
PC
2
Side input shield
SIDE IO
SIDE KEY
3
Under cover (509)
CARD
4
Sub multi chassis
5
T panel EH Assy
MAIN
IO_AUDIO
50F DIGITAL
7
Front bezel (509HTVE)
LED
RLS
IR
8
F. Chassis HT Assy 50
F. Chassis HB 50
8
Sub frame L Assy (50)
Sub frame R Assy (50)
8
Address heatsink S, L
50F ADDRESS L
50F ADDRESS S
9
F. Chassis VL Assy 50
50F SCAN A
50F SCAN B

4.2 DISASSEMBLY

Disassembly

1 Rear Case (509)

● Power button case

① Remove the two screws. (ABA1379)

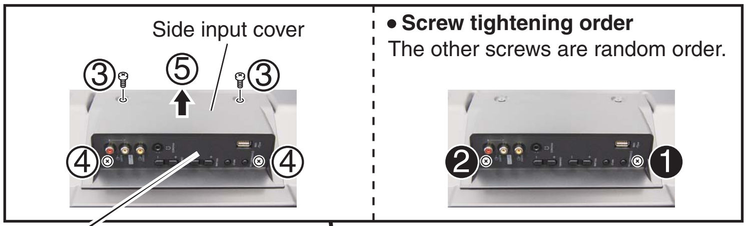
② Remove the power button case.

● Side input cover

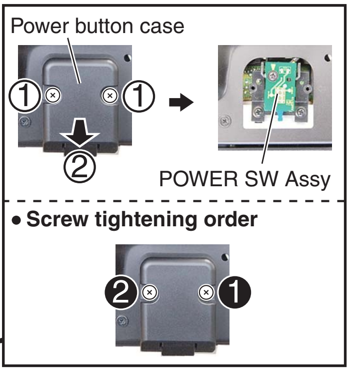
③ Remove the two screws. (ABA1378)

④ Remove the two screws. (ABA1377)

⑤ Remove the side input cover.


Side input cover
③
⑤
③
④
④
❷
❶

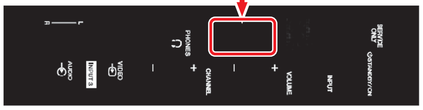
• Screw tightening order
The other screws are random order.


Power button case
①
①
②
POWER SW Assy
❷
❶

• Screw tightening order

A cutout for an HDMI connector is provided on the side input cover, and the side label is attached over the cutout. Be careful not to accidentally push on the area of the label indicated in the figure below, because that area will become indented.

Side label


PHONES
INPUT 5
VIDEO
AUDIO
CHANNEL
VOLUME
INPUT
STANDBY/ON
SERVICE ONLY

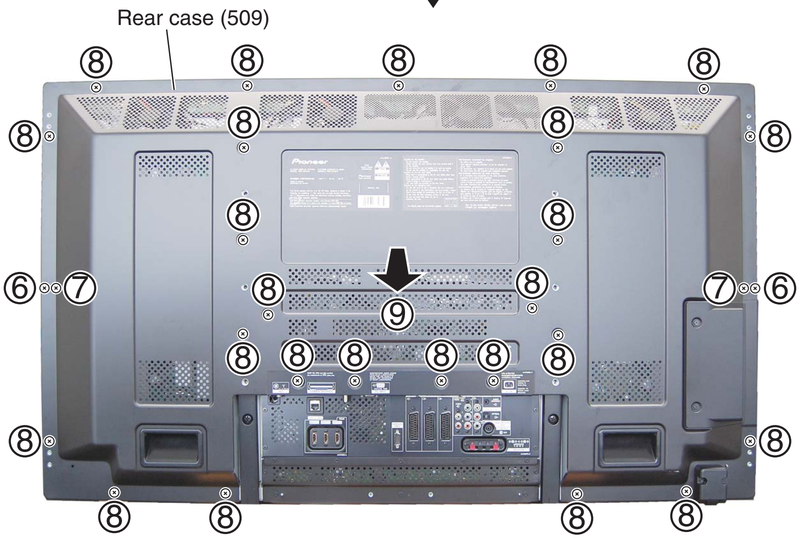
● Rear case (509)

⑥ Remove the two screws. (ABA1380)

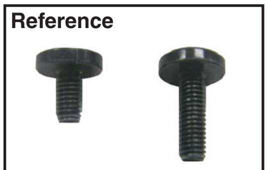
⑦ Remove the two screws. (ABA1379)

⑧ Remove the 25 screws. (ABA1377)

⑨ Remove the rear case (509).

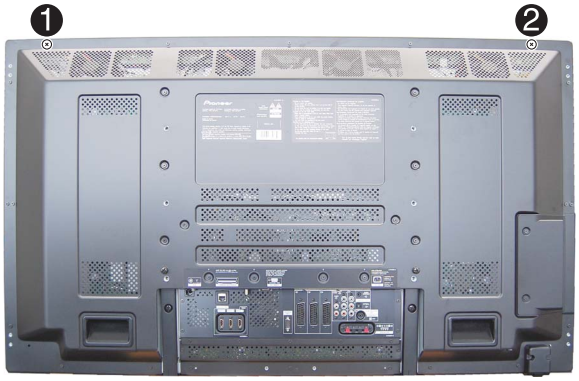

Rear case (509)
⑧
⑥
⑦
⑨

Reference


ABA1377
ABA1378

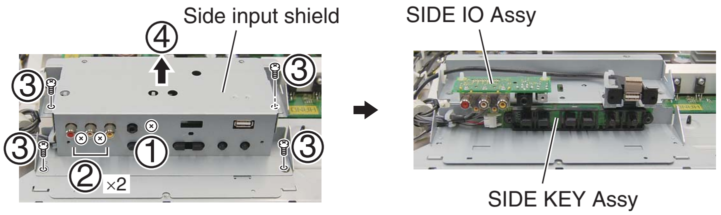
■ Screw tightening order

The other screws are random order.



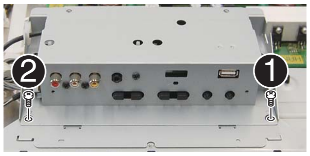
2 Side Input Shield

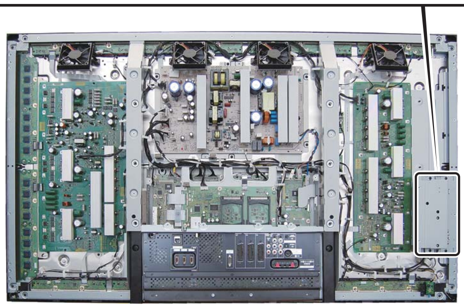
① Remove the one screw. (BMZ30P080FTB)
② Remove the two screws. (BPZ30P080FTB)
③ Remove the four screws. (AMZ30P060FTB)
④ Remove the side input shield.



Side input shield
SIDE IO Assy
④
③
③
③
③
①
② ×2
SIDE KEY Assy

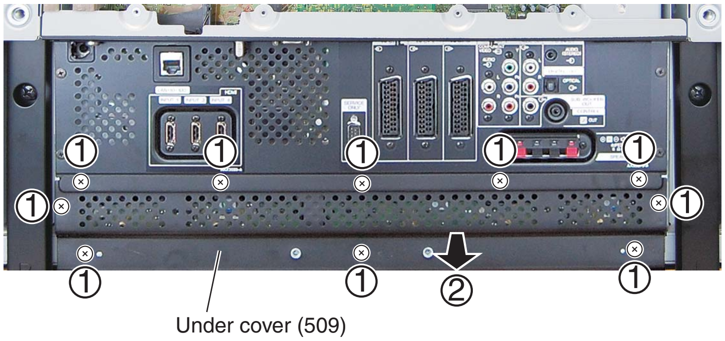
● Screw tightening order
The other screws are random order.





3 Under Cover (509)

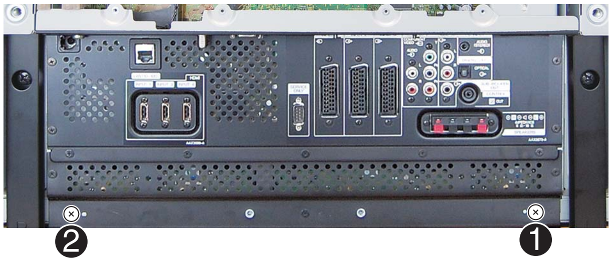
① Remove the 10 screws. (ABA1377)
② Remove the under cover (509).



①
①
①
①
①
①
①
①
①
①
②
Under cover (509)

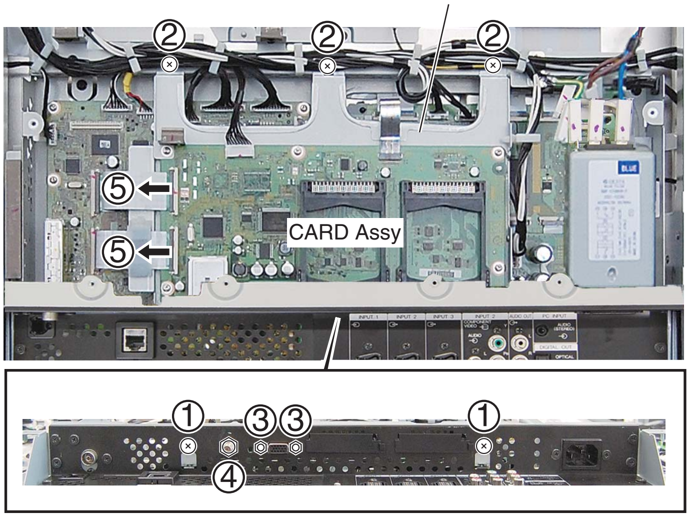
■ Screw tightening order

The other screws are random order.



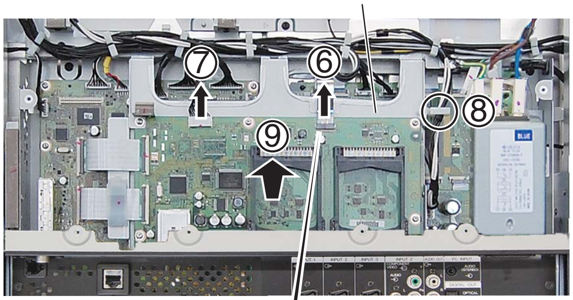
4 Sub Multi Chassis

① Remove the two screws. (ABA1377)
② Remove the three screws. (AMZ30P060FTB)
③ Remove the two hexagon head screws. (ABA1382)
④ Remove the one washer faced nut. (BBN1005)
⑤ Disconnect the two flexible cables.

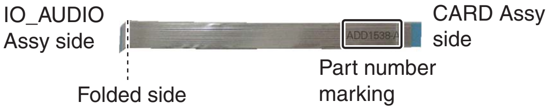

Sub multi chassis
②
②
②
⑤
⑤
CARD Assy
①
③
③
①
④

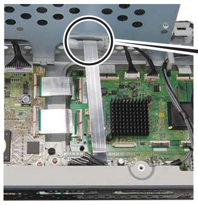
Exchange

⑥ Disconnect the one flexible cable.
⑦ Disconnect the one connector.
⑧ Release the jumper wire from the wire saddle.
⑨ Remove the sub multi chassis with PC board.

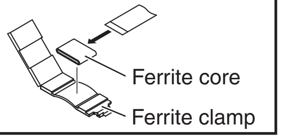

Sub multi chassis
⑦
⑥
⑧
⑨

Note on connection


IO_AUDIO Assy side
CARD Assy side
ADD1538
Part number marking
Folded side

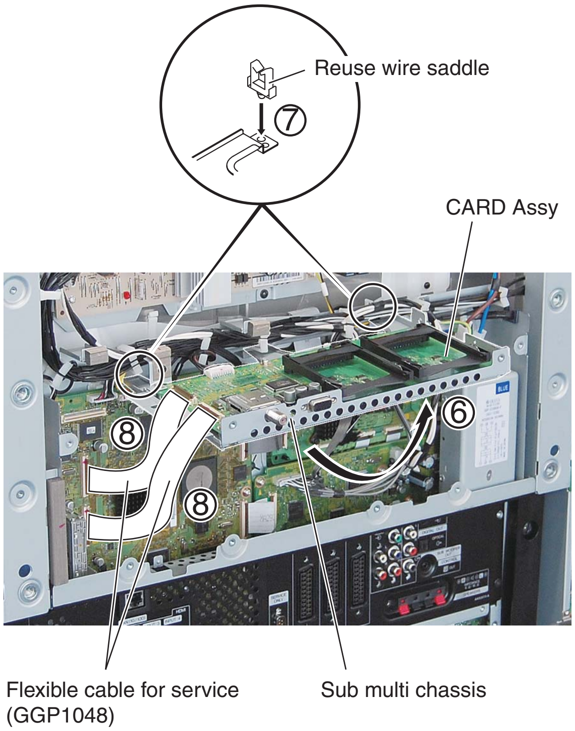


Do the flexible cable through the ferrite core.


Ferrite core
Ferrite clamp

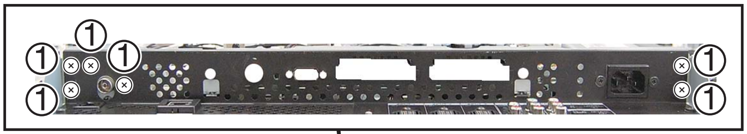
Diagnosis

⑥ Lift the sub multi chassis to the direction of the arrow.
⑦ Fix the sub multi chassis to the product with two reuse wire saddles.
⑧ Connect the two flexible cables for service.

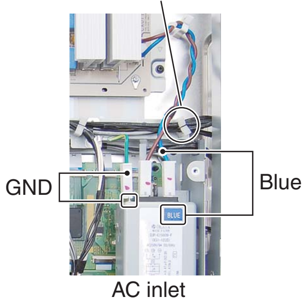

Reuse wire saddle
⑦
CARD Assy
⑥
⑧
⑧
Flexible cable for service (GGP1048)
Sub multi chassis

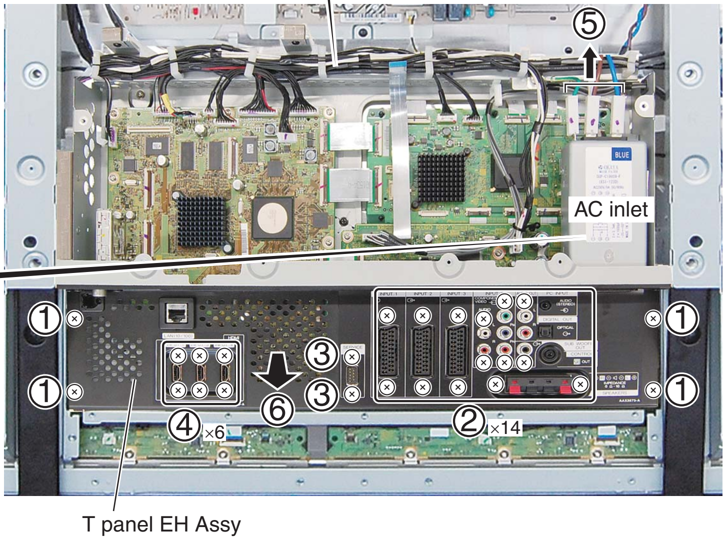
5 T Panel EH Assy

① Remove the 10 screws. (ABA1377)
② Remove the 14 screws. (BPZ30P080FTB)
③ Remove the two hexagon head screws. (ABA1382)
④ Remove the six screws. (BMZ30P060FTB)
⑤ Disconnect the three connectors.
⑥ Remove the T panel EH Assy.



Do NOT pass the AC inlet jumper wire through this wire saddle.

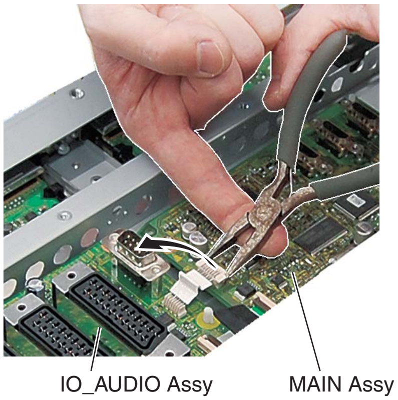

GND
Blue
AC inlet

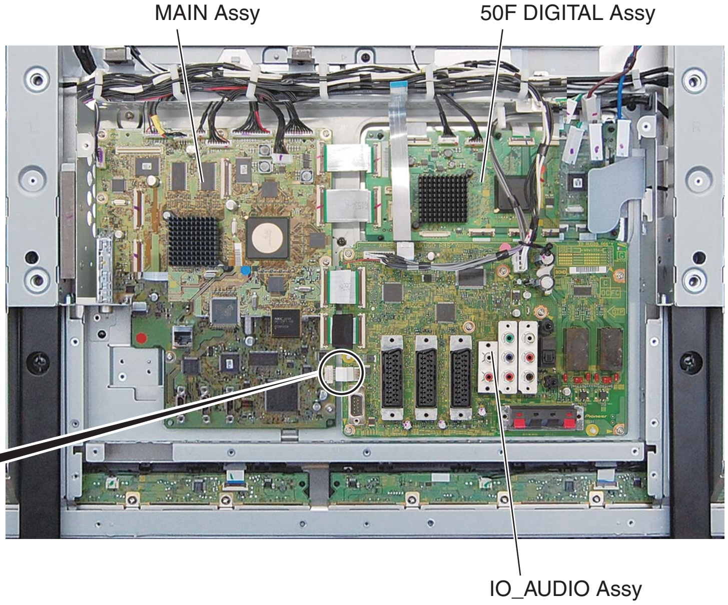

⑤
AC inlet
①
①
①
①
③
③
⑥
④ ×6
② ×14
T panel EH Assy

Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype. Upon servicing, be sure to restore the original wiring of the unit after repair work.

■ How to remove the bridge connector

(1) Grip the two short edges of the connector with longnose pliers.
(2) Insert a finger between the longnose pliers and the board to protect the board and the mounted parts on the board from accidental damage by the pliers then, using your finger as a fulcrum and the pliers as a lever, pry the connector upward to remove it.

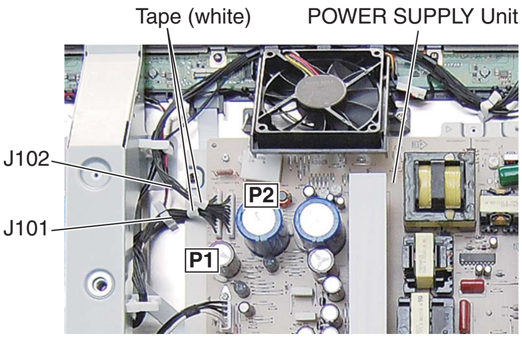

IO_AUDIO Assy
MAIN Assy


MAIN Assy
50F DIGITAL Assy
IO_AUDIO Assy

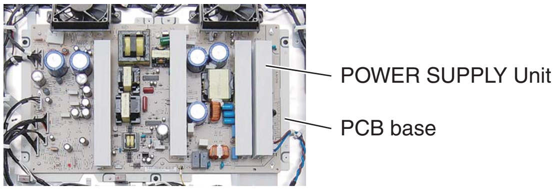
Notes on Lead Dressing

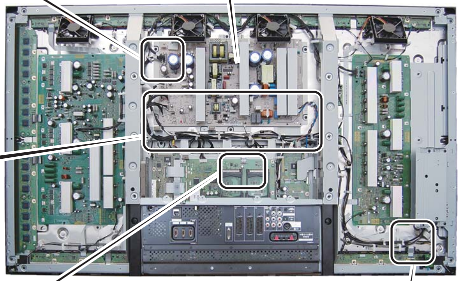
Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype. Upon servicing, be sure to restore the original wiring of the unit after repair work.

The J101 and J102 cables require correct orientation for connection. Connect the connectors with white tape to the POWER SUPPLY Unit.

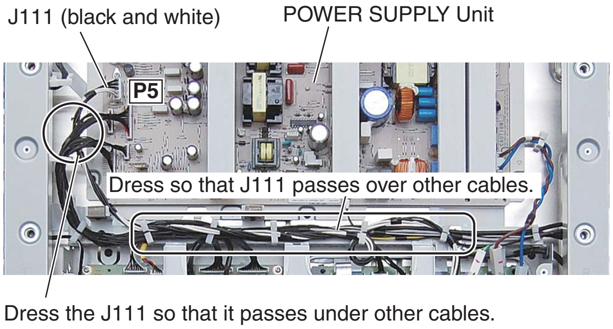

Tape (white)
POWER SUPPLY Unit
J102
P2
J101
P1

When removing the POWER SUPPLY Unit, be sure to remove not only the POWER SUPPLY Unit but entire PCB base.

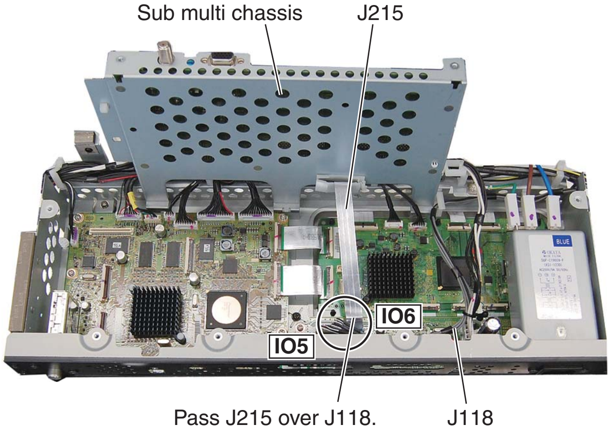

POWER SUPPLY Unit
PCB base



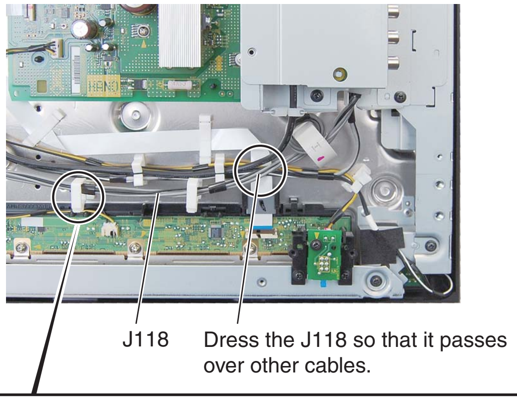
Around the periphery of the Multibase, the J111 cable wires (black and white) must be bound lastly then be dressed so that they pass over other cables.


J111 (black and white)
POWER SUPPLY Unit
P5
Dress so that J111 passes over other cables.
Dress the J111 so that it passes under other cables.

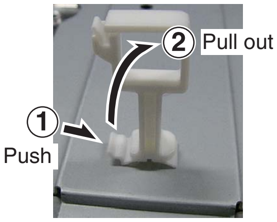
The J215 cable must be passed over the J118 cable.


Sub multi chassis
J215
IO6
IO5
Pass J215 over J118.
J118

Dress the J118 cable so that it passes over other cables.


J118
Dress the J118 so that it passes over other cables.

How to remove the newly adopted wire saddle from the chassis


② Pull out
① Push

6 Access to 50F DIGITAL Assy

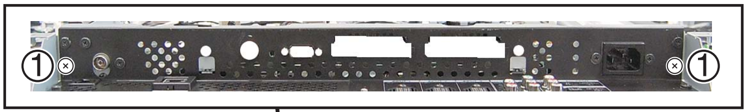
Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype. Upon servicing, be sure to restore the original wiring of the unit after repair work.

Note:
When you remove whole Multibase Section, it is not necessary to remove T panel EH Assy.

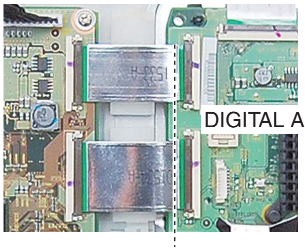
① Remove the six screws. (ABA1377)

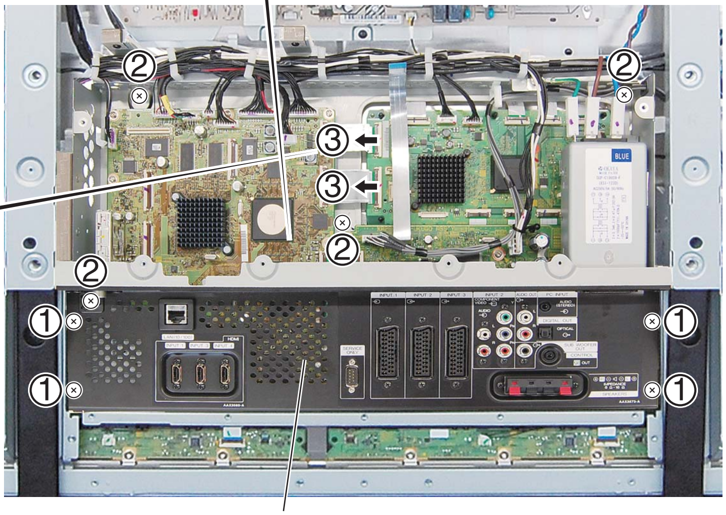
② Remove the four screws. (ABA1351)

③ Disconnect the two flexible cables.



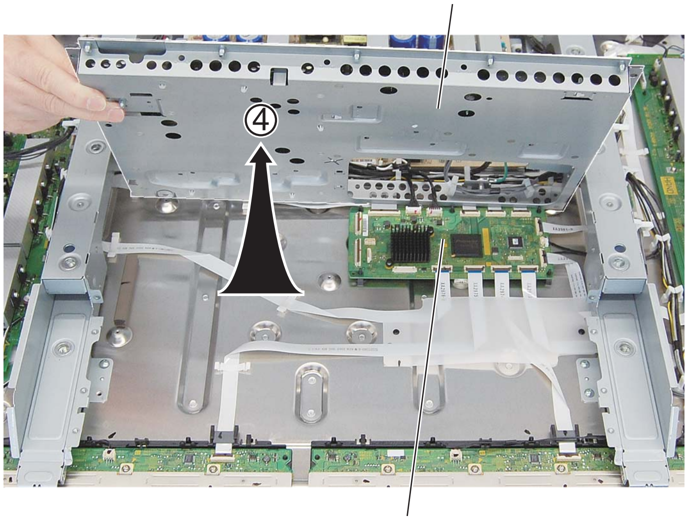
Note on connection of the flexible cable
This flexible cables requires correct orientation for connection. Connect the folded side of the cable to the connector on the DIGITAL Assy, as shown in the photo below. **Reversely connecting the cable will damage the Assy.**





T panel EH Assy

④ Lift the Multibase Section to the direction of the arrow.

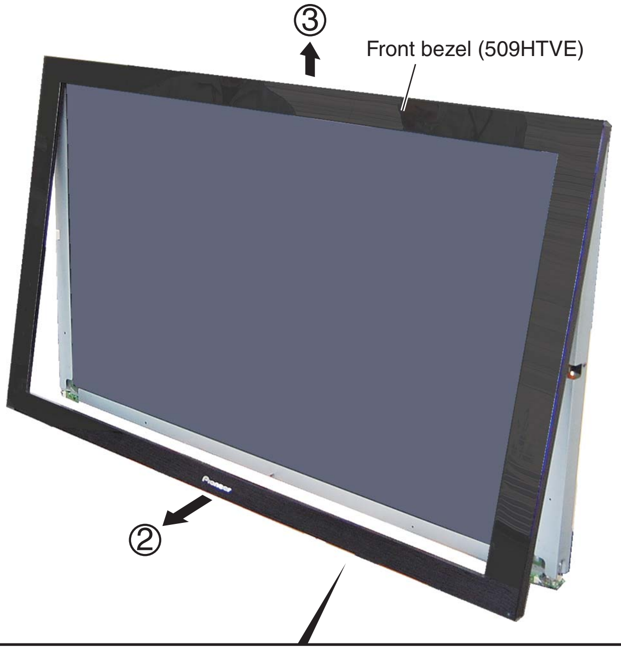


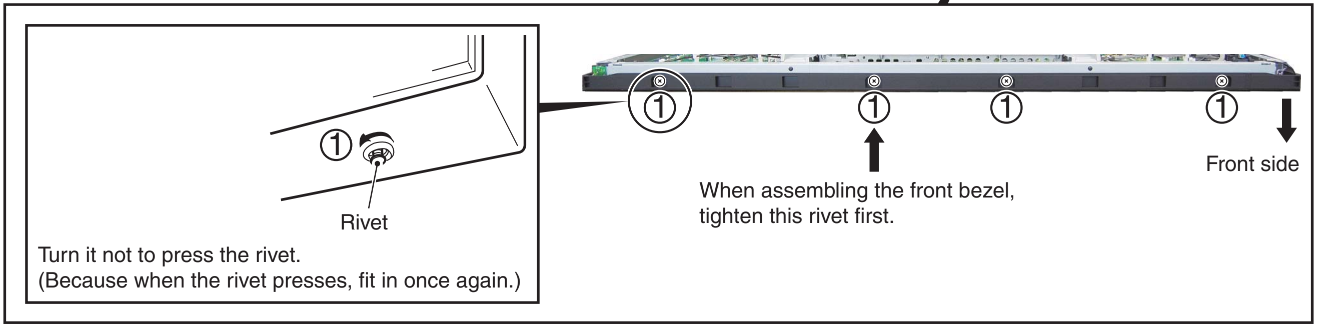
7 Front Bezel (509HTVE)

① Remove the four rivets.

② Pull the lower part of the front bezel (509HTVE) toward you and out.

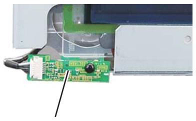
③ Remove the front bezel (509HTVE), by pulling it upward.

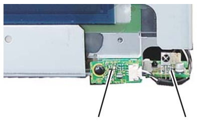

③
Front bezel (509HTVE)
②


①
Rivet
①
①
①
①
Front side

Turn it not to press the rivet.
(Because when the rivet presses, fit in once again.)

When assembling the front bezel, tighten this rivet first.

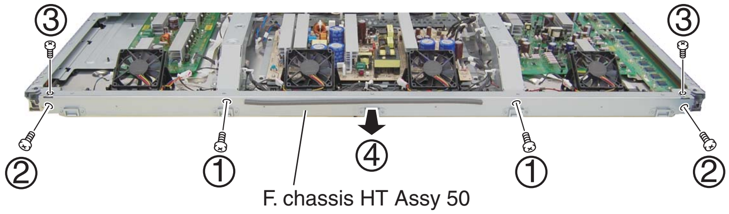



RLS Assy
IR Assy

8 Access to ADDRESS L and S Assys

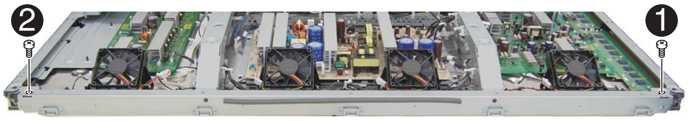
● F. Chassis HT Assy 50

① Remove the two screws. (AMZ30P060FTB)
② Remove the two screws. (ABZ30P080FTC)
③ Remove the two screws. (AMZ30P060FTB)
④ Remove the F. chassis HT Assy 50.



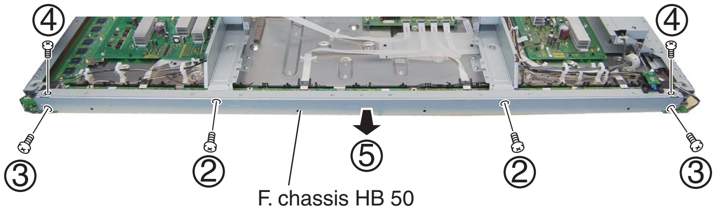
Screw tightening order

The other screws are random order.



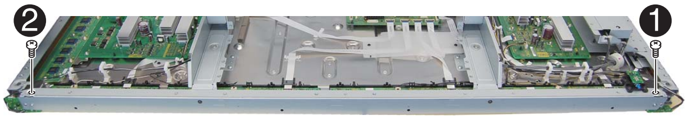
● F. Chassis HB 50

① Disconnect cables, connectors, as required.
② Remove the two screws. (AMZ30P060FTB)
③ Remove the two screws. (ABZ30P080FTC)
④ Remove the two screws. (AMZ30P060FTB)
⑤ Remove the F. chassis HB 50.



Screw tightening order

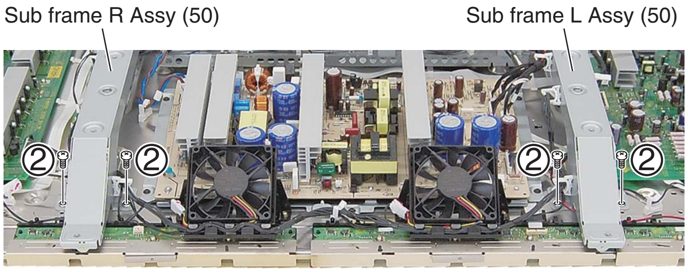
The other screws are random order.

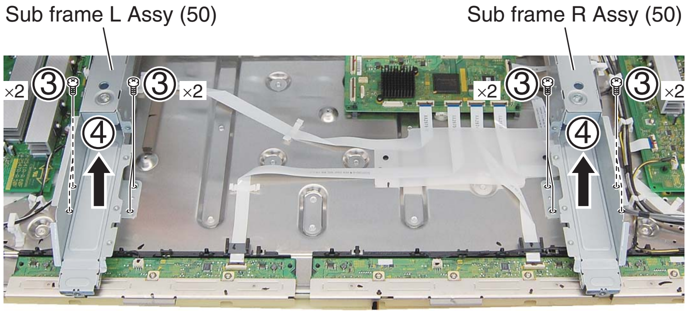


● Sub frame L and R Assys

① Disconnect cables, connectors, as required.

② Remove the four screws. (TBZ40P060FTC)


Sub frame R Assy (50)
Sub frame L Assy (50)
②
②
②
②

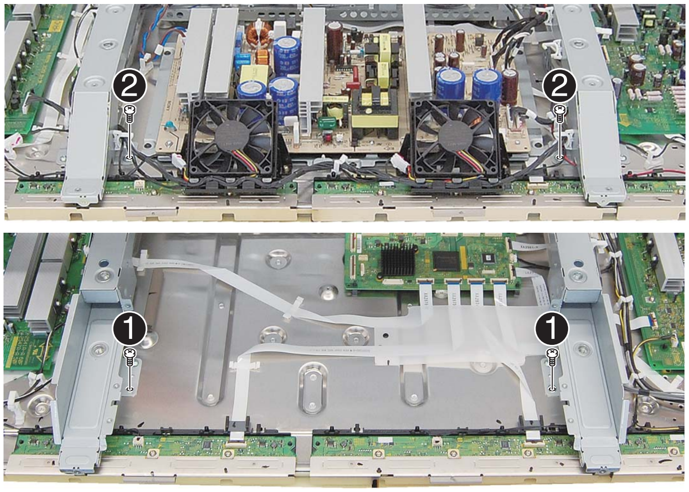

Sub frame L Assy (50)
Sub frame R Assy (50)
×2 ③
③ ×2
×2 ③
③ ×2
④
④

③ Remove the eight screws. (TBZ40P060FTC)

④ Remove the sub frame L and Assys.

■ Screw tightening order

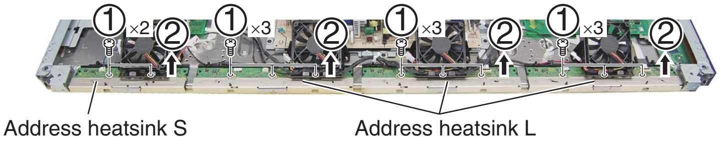
The other screws are random order.

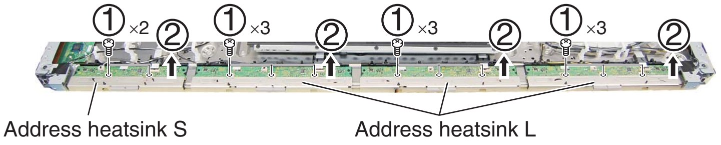


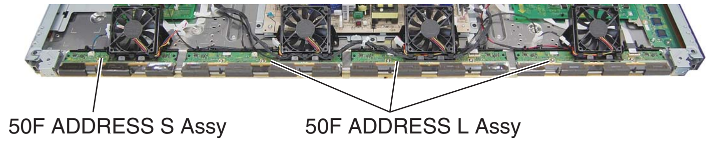
● Address heatsink S , L

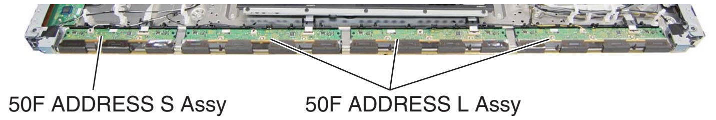
① Remove the 22 screws. (ABA1351)

② Remove the two address heatsinks S and six address heatsinks L.


① ×2
②
① ×3
②
① ×3
②
① ×3
②
Address heatsink S
Address heatsink L

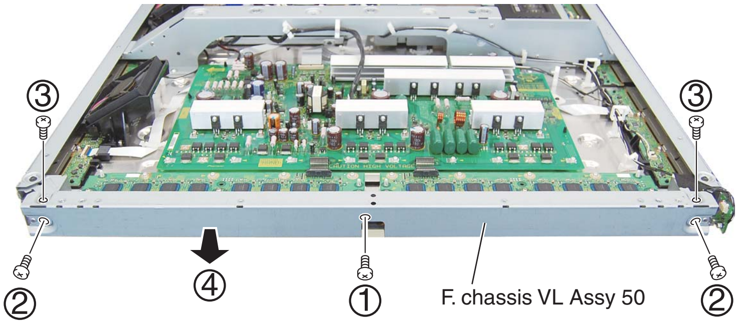

① ×2
②
① ×3
②
① ×3
②
① ×3
②
Address heatsink S
Address heatsink L


50F ADDRESS S Assy
50F ADDRESS L Assy


50F ADDRESS S Assy
50F ADDRESS L Assy

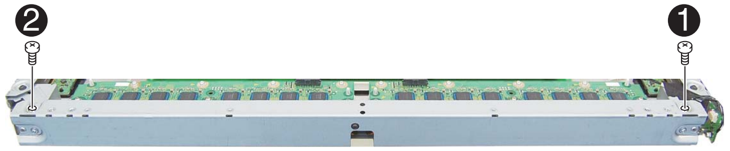
9 Access to SCAN A and B Assys

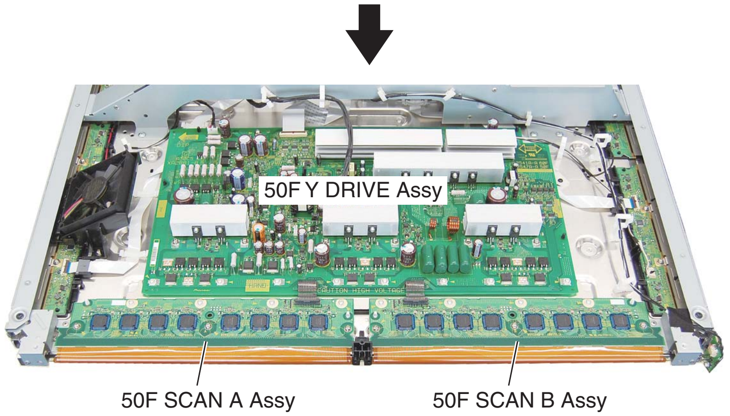
① Remove the one screw. (APZ30P080FTB)
② Remove the two screws. (ABZ30P080FTC)
③ Remove the two screws. (AMZ30P060FTB)
④ Remove the F. chassis VL Assy 50.


③
③
②
④
①
F. chassis VL Assy 50
②

Screw tightening order

The other screws are random order.




50F Y DRIVE Assy
50F SCAN A Assy
50F SCAN B Assy

5. EACH SETTING AND ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

5.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED

For each setting and adjustment when each PCB Assy and parts are replaced, refer to the original service manual (ARP3480).

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	Refer to “8.3 HOW TO CLEAR HISTORY DATA” .
DIGITAL Assy	➡	Writing of backup data is required. Refer to the “8.2 BACKUP OF THE EEPROM (DIGITAL ASSY)”.
X DRIVE Assy	➡	No adjustment required
Y DRIVE Assy	➡	No adjustment required
Service Panel Assy	➡	Refer to “8.3 HOW TO CLEAR HISTORY DATA” and “8.4 ADJUSTMENTS WHEN THE SERVICE PANEL ASSY IS REPLACED”.
MAIN Assy (*)	➡	Execute section [4-5] AUTO ADJUSTMENT of 6.2 [4] INITIALIZE.
IO AUDIO Assy	➡	Execute section [4-5] AUTO ADJUSTMENT of 6.2 [4] INITIALIZE.
PANEL SENSOR Assy	➡	No adjustment required Backup data are automatically copied during the next power-off.
CARD Assy	➡	No adjustment required
Other assemblies	➡	No adjustment required

(*) : When replacing the MAIN Assy, be sure to perform the FINAL SETUP.

When any of the following assemblies is repaired

Notes on replacing parts

For the parts described in the list below, replacement is required for the whole Assy, not only the defective part.
If any part listed below is identified as defective and needs replacement, replace the whole Assy, and make necessary adjustments after replacement.

PCB Assy No.	Assy Name	Parts that Require Whole-Assy Replacement		
		Ref No.	Function Name	Part No.
AWV2556	MAIN Assy	IC5002	EEPROM	BR24L02FV-W
		IC5003	EEPROM	BR24L02FV-W
		IC5004	EEPROM	BR24L02FV-W
		IC6001	System IC	BCM7404XKPB11G
		IC7004	EEPROM	BR24L64F-W
		IC6201	DDR SDRAM	EDD5116AFTA-5B-E
		IC6202	DDR SDRAM	EDD5116AFTA-5B-E
		IC6203	DDR SDRAM	EDD5116AFTA-5B-E
		IC6204	DDR SDRAM	EDD5116AFTA-5B-E
		IC6403	Flash ROM	AGC1083
		IC6701	Flash ROM	AGC1079
		IC6811	Flash UCOM	AGC1072
		IC7202	Flash ROM	AGC1074
AWW2543	DIGITAL Assy	IC3302	Flash ROM	AGC1071
		IC3601	Flash UCOM	AGC1070
AWV2558	CARD Assy	IC9602	EEPROM	BR24L01AFJ-W
AWW2546	X DRIVE Assy	• Parts of X D-D CON BLOCK		
AWW2547	Y DRIVE Assy	• Parts of Y VF D-D CON BLOCK 1 • Parts of Y MAIN D-D CON BLOCK 1 • Parts of Y MAIN D-D CON BLOCK 2		

Reason: The whole Assy must be replaced, because adjustments and data rewriting for the Assy at the level of production line are required.

For the parts described in the table below, replacement of individual parts is difficult, because a heat pad is provided under the bottom of the ICs.

PCB Assy No.	Assy Name	Parts that Require Whole-Assy Replacement		
		Ref No.	Function Name	Part No.
AWV2556	MAIN Assy	IC4501	DC/DC Converter	LTC3407EMSE-2
		IC4901	HDMI Rx	SII9125CTU
AWW1354	IO AUDIO Assy	IC8401	Digital Amp	TAS5122DCA

POWER SUPPLY Unit	The assembly must be replaced as a unit, and no part replacement is allowed.
MAIN Assy	No adjustment is required after replacement of parts other than those shown in “8.7 ADJUSTMENT WHEN THE MAIN OR IO_AUDIO ASSY IS REPLACED.
IO AUDIO Assy	No adjustment is required after replacement of parts other than those shown in “8.7 ADJUSTMENT WHEN THE MAIN OR IO_AUDIO ASSY IS REPLACED.
DIGITAL Assy	No adjustment required
X DRIVE Assy	No adjustment is required after replacement of parts other than those shown in “8.5 ADJUSTMENT WHEN THE DRIVE ASSYS ARE REPLACED.
Y DRIVE Assy	No adjustment is required after replacement of parts other than those shown in “8.5 ADJUSTMENT WHEN THE DRIVE ASSYS ARE REPLACED.
ADDRESS Assy	No adjustment required
PANEL SENSOR Assy	No adjustment required
CARD Assy	No adjustment required
Other assemblies	No adjustment required

5.2 HOW TO UPDATE USB

Preparation

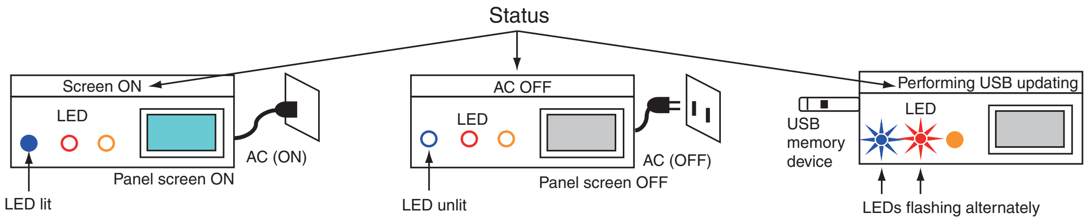
Expand the image-file folder for USB updating in the root directory of the USB memory device.

Example: Folder construction after expansion in the root directory of the USB memory device

(With the nonencrypted folder)	[update] ├ boot.img ├ update.ctl ├ update.iso └ update.lst
(With the encrypted folder)	[update] ├ boot.img ├ update.ctl ├ update.enc ├ update.key └ update.lst

An encrypted image-file folder for USB updating will be released for general users.

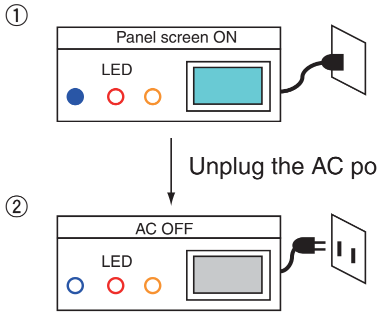
Description of the figures


Status
Screen ON
LED
AC (ON)
Panel screen ON
LED lit
AC OFF
LED
AC (OFF)
Panel screen OFF
LED unlit
Performing USB updating
LED
USB memory device
LEDs flashing alternately

Procedures

1. Setting before USB updating

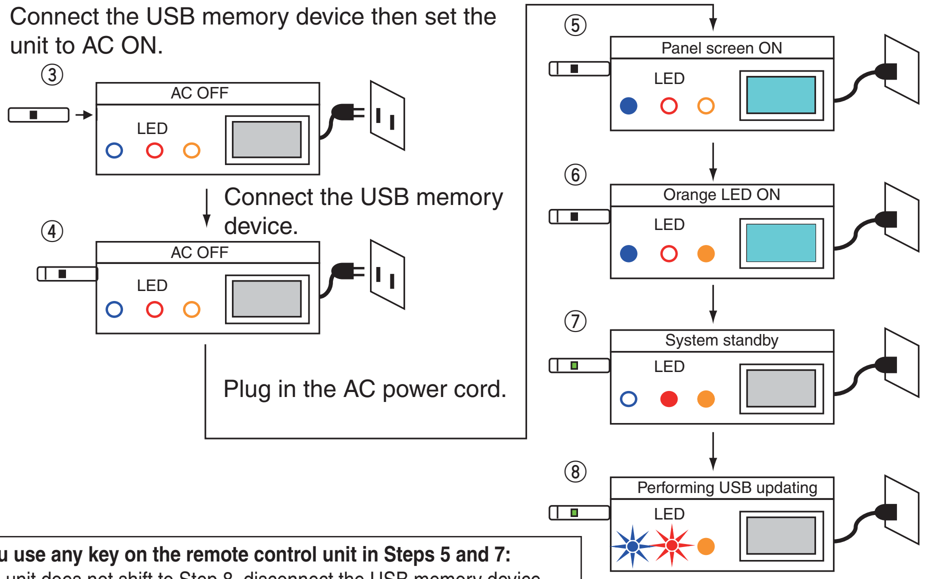
Change the power status of the Panel from Screen ON to AC OFF.


①
Panel screen ON
LED
②
AC OFF
LED

Unplug the AC power cord.

2. Performing USB updating

Connect the USB memory device then set the unit to AC ON.


③
AC OFF
LED
④
AC OFF
LED
⑤
Panel screen ON
LED
⑥
Orange LED ON
LED
⑦
System standby
LED
⑧
Performing USB updating
LED

Connect the USB memory device.

Plug in the AC power cord.

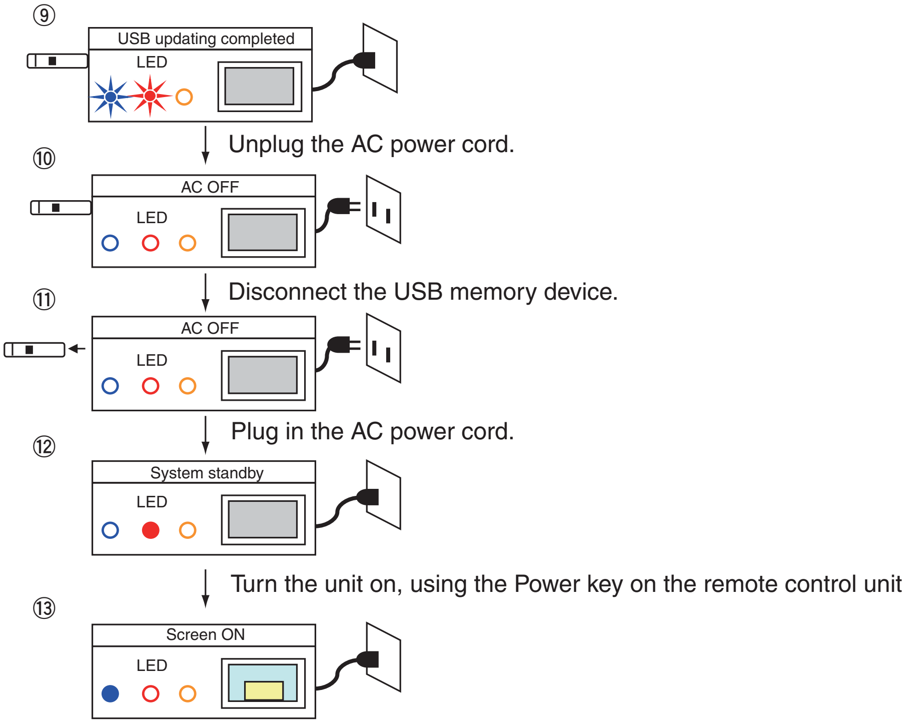
Note:
If you interrupt the updating procedure in this step, updating is not started, and normal startup will begin.

NEVER use the remote control unit.
(Especially DO NOT use the Power key.)

If you use any key on the remote control unit in Steps 5 and 7:
If the unit does not shift to Step 8, disconnect the USB memory device then try the procedures from the beginning.
If the unit shifts to Step 8, continue the updating procedures as described.

3. Completion procedures for USB updating

After USB updating is completed, perform the following steps (unplug the AC power cord, disconnect the USB memory device, then plug the AC power cord back in).



Unplug the AC power cord.

Disconnect the USB memory device.

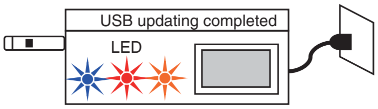
Plug in the AC power cord.

Turn the unit on, using the Power key on the remote control unit

The GUI indicating that updating is completed is displayed.

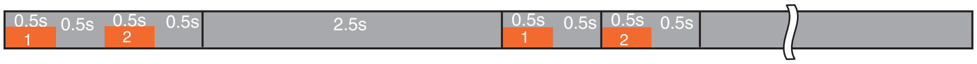
■ List of frequency of LED flashing (orange) when updating fails

If updating is interrupted, the orange LED flashes to warn you of the error.



Frequency of Orange LED Flashing	Error Content	Details
1	(Not used)	
2	Version error	The same version or a newer version of software has already been loaded.
3	USB update startup error	Startup of USB updating failed.
4	DTV update error	Updating of the DTV software failed.
5	Main download error	Updating of the MAIN microcomputer software failed.
6	ARIA download error	Updating of the ASIC software in the previous stage failed.
7	ZEUS download error	Updating of the ASIC software in the later stage failed.
8	Module download error	Updating of the module microcomputer software failed.
9	IF download error	Updating of the IF microcomputer software failed.
10	USB disconnection	Abnormality in the USB memory device
11 to 13	Reserved	-
14	Destination error	The software for a different destination (Europe/North America/Australia) was used for updating.

Example: In a case where the orange LED flashes twice (version error)
Repetition of 1-sec flashing twice followed by a 2.5-sec pause (OFF)



Under the following conditions, USB updating procedures will be interrupted at Step ⑤ above, and normal startup will begin, but the LED does not flash for error indication.

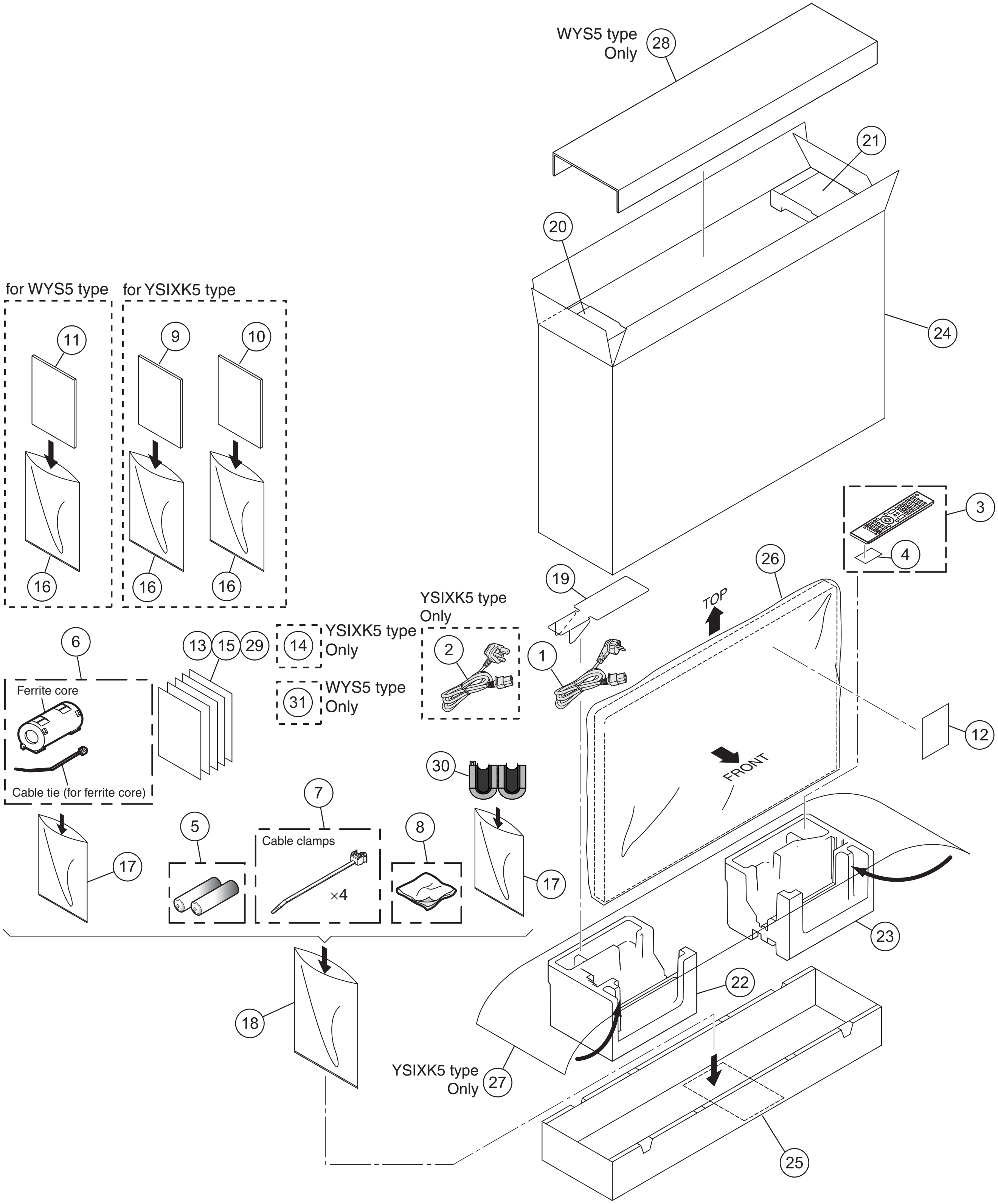
Conditions under which the LED will not flash for error indication

- Any USB updating file is damaged
- Not all USB updating files are stored in the USB memory device
- The USB updating files are modified
- The USB memory device is defective

6. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

6.1 PACKING SECTION


WYS5 type Only
28
21
20
24
for WYS5 type
for YSIXK5 type
11
9
10
16
16
16
3
4
26
19
TOP
YSIXK5 type Only
6
13
15
29
14
YSIXK5 type Only
2
1
31
WYS5 type Only
Ferrite core
Cable tie (for ferrite core)
12
FRONT
30
7
5
Cable clamps
8
×4
17
17
23
22
18
YSIXK5 type Only
27
25

(1) PACKING SECTION PARTS LIST

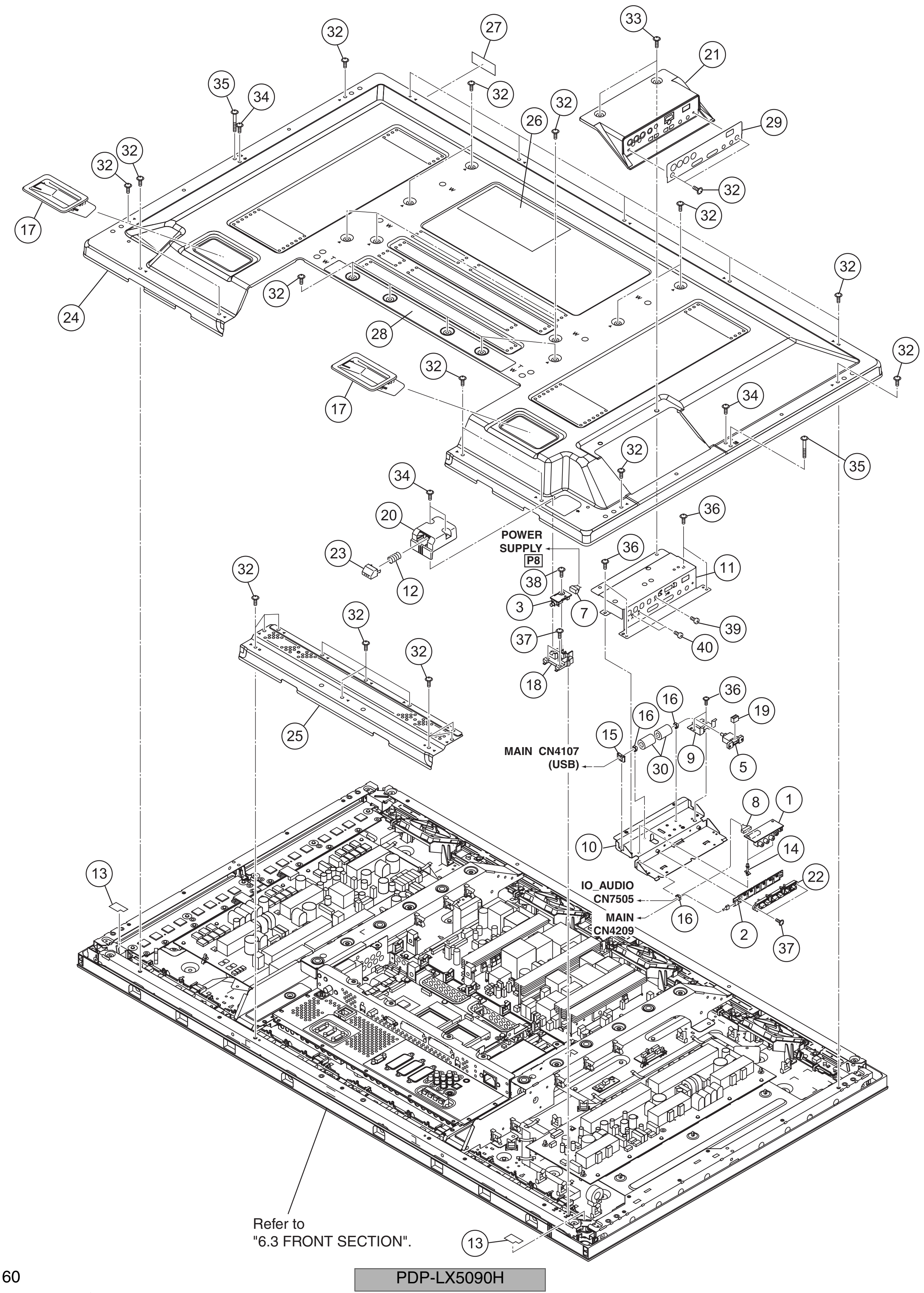
Mark	No.	Description	Part No.
⚠	1	Power Cable (2 m)	ADG1214
⚠	2	Power Cable (2 m)	See Contrast table (2)
	3	Remote Control Unit	AXD1563
	4	Battery Cover (Black)	AZN2784
NSP	5	Dry Cell Battery (R6, AA)	VEM1031
⚠	6	Ferrite Core	ATX1039
	7	Binder Assy	AEC2158
	8	Cleaning Cloth	AED1285
	9	Operating Instructions (English / French / German)	See Contrast table (2)
	10	Operating Instructions (Italian / Dutch / Spanish / Russian)	See Contrast table (2)
	11	Operating Instructions (Russian)	See Contrast table (2)
	12	Caution Card	See Contrast table (2)
	13	Cleaning Caution	See Contrast table (2)
	14	Block Diagram (509)	See Contrast table (2)
NSP	15	Warranty Card EU	See Contrast table (2)
	16	Vinyl Bag	AHG1310
	17	Vinyl Bag	AHG1337
NSP	18	Vinyl Bag	AHG1340
	19	Power Cord Lid (5090)	See Contrast table (2)
	20	Pad (509 T-L EU)	See Contrast table (2)
	21	Pad (509 T-R EU)	See Contrast table (2)
	22	Pad (509 B-L EU)	See Contrast table (2)
	23	Pad (509 B-R EU)	See Contrast table (2)
	24	Upper Carton (5090H)	See Contrast table (2)
	25	Under Carton (5090)	See Contrast table (2)
	26	Mirror Mat	AHG1284
	27	HD Sheet	See Contrast table (2)
	28	Carton Board (509)	See Contrast table (2)
	29	Ferrite Core Info.	See Contrast table (2)
⚠	30	Filter	CTX1089
	31	WMDRM Infomation	See Contrast table (2)

(2) CONTRAST TABLE

PDP-LX5090H/YSIXK5 and WYS5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-LX5090H /YSIXK5	PDP-LX5090H /WYS5
⚠	2	Power Cable (2 m)	ADG1223	Not used
	9	Operating Instructions (English / French / German)	ARE1490	Not used
	10	Operating Instructions (Italian / Dutch / Spanish / Russian)	ARC1604	Not used
	11	Operating Instructions (Russian)	Not used	ARC1617
	12	Caution Card	ARM1310	ARM1232
	13	Cleaning Caution PTK	ARM1311	Not used
	13	Cleaning Caution (11L)	Not used	ARM1283
	14	Block Diagram (509)	ARY1210	Not used
NSP	15	Warranty Card EU	ARY7112	ARY7110
	19	Power Cord Lid (5090)	AHC1113	AHC1114
	20	Pad (509 T-L EU)	AHA2714	AHA2727
	21	Pad (509 T-R EU)	AHA2715	AHA2728
	22	Pad (509 B-L EU)	AHA2716	AHA2729
	23	Pad (509 B-R EU)	AHA2726	AHA2730
	24	Upper Carton (5090H)	AHD3697	AHD3698
	25	Under Carton (5090)	AHD3672	AHD3673
	27	HD Sheet	AHG1416	Not used
	28	Carton Board (509)	Not used	AHB1303
	29	Ferrite Core Info.	ARM1396	ARM1395
	31	WMDRM Infomation	Not used	ARM1404

6.2 REAR SECTION


33
32
27
21
35
34
32
32
26
29
32
32
32
32
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POWER SUPPLY
P8
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MAIN CN4107 (USB)
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IO_AUDIO CN7505
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MAIN CN4209
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Refer to "6.3 FRONT SECTION".
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(1) REAR SECTION PARTS LIST

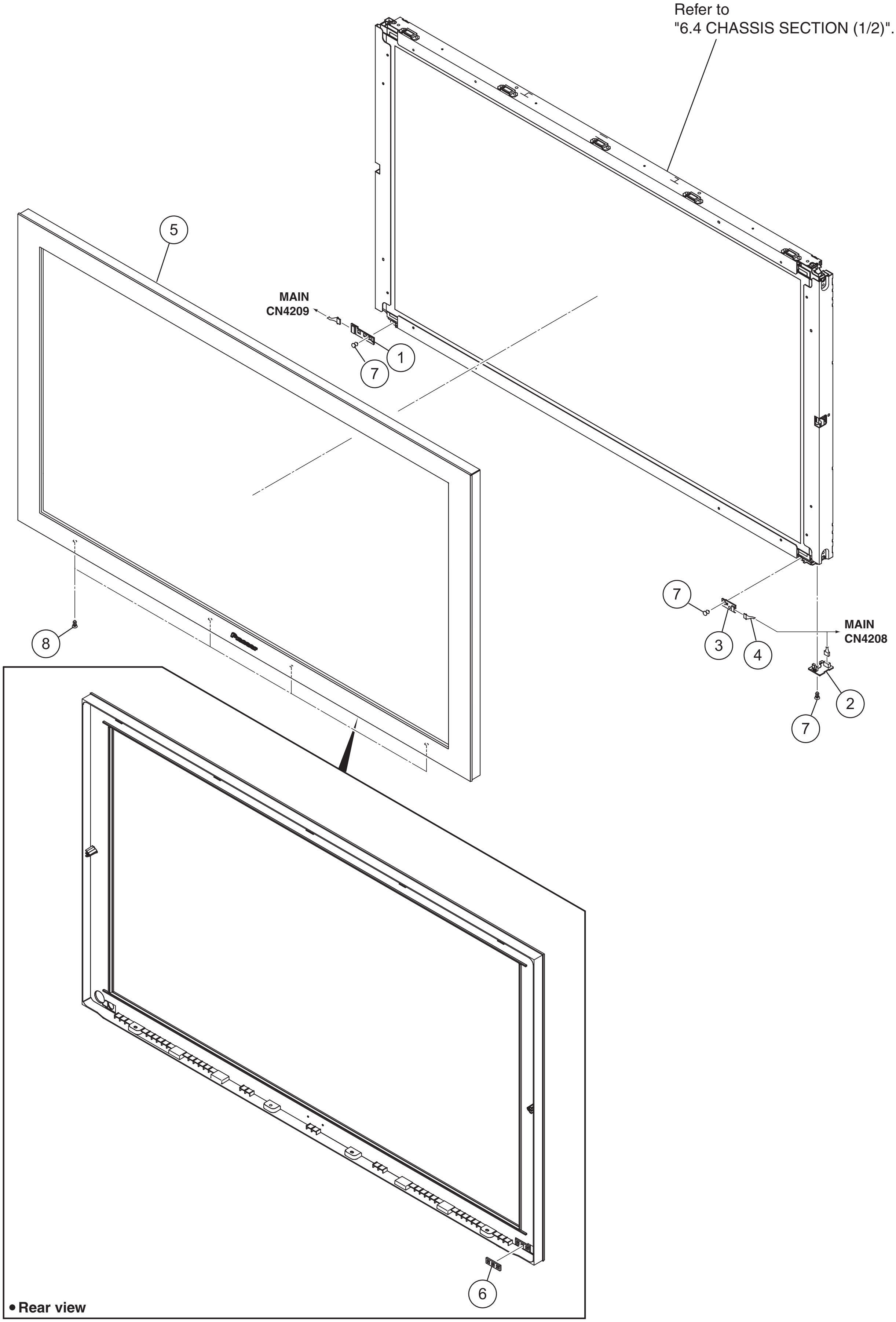
Mark	No.	Description	Part No.
	1	SIDE IO Assy	AWW1358
	2	SIDE KEY Assy	AWW1361
	3	POWER SW Assy	AWW1366
	4	• • • • •	
	5	USB Cable (J301)(120 cm)	ADF1034
	6	• • • • •	
	7	3P Housing Wire (J103)	ADX3630
	8	11P Housing Wire (J118)	ADX3644
	9	USB Holder	ANG3134
	10	Side Input Base	ANG3215
	11	Side Input Shield	ANG3216
	12	Coil Spring	ABH1125
	13	Sensor Cushion B (428)	AEB1486
NSP	14	PCB Spacer	AEC1084
	15	Edge Saddle	AEC1571
	16	Mini Clamp	AEC1971
	17	Inner Grip Assy	See Contrast table (2)
	18	Power Button Support	AMR3763
⚠	19	USB Gasket	ANK1962
	20	Power Button Case	AAK2927
	21	Side Input Cover	AMR3754
	22	Operation Button	AAC1569
	23	Power Button (508F)	AAD4152
	24	Rear Case (509)	ANE1671
	25	Under Cover (509)	ANE1672
NSP	26	Name Label (LX5090H)	See Contrast table (2)
	27	Serial Sheet	AAX3143
	28	Label A (EH)	AAX3569
	29	Side Label (EU)	AAK2932
⚠	30	Ferrite Core (F14, F15)	ATX1069
	31	• • • • •	
	32	Screw (M3 x 6)	ABA1377
	33	Screw (M3 x 10)	ABA1378
	34	Screw (3 x 8 P)	ABA1379
	35	Screw (3 x 25 P)	ABA1380
	36	Screw	AMZ30P060FTB
	37	Screw	AMZ30P080FTB
	38	Screw	APZ30P080FTB
	39	Screw	BMZ30P080FTB
	40	Screw	BPZ30P080FTB

(2) CONTRAST TABLE

PDP-LX5090H/YSIXK5 and WYS5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-LX5090H /YSIXK5	PDP-LX5090H /WYS5
	17	Inner Grip Assy	AMR3693	AMR3434
NSP	26	Name Label (LX5090H)	AAL3032	AAL3034

6.3 FRONT SECTION


Refer to
"6.4 CHASSIS SECTION (1/2)".
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MAIN
CN4209
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MAIN
CN4208
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8
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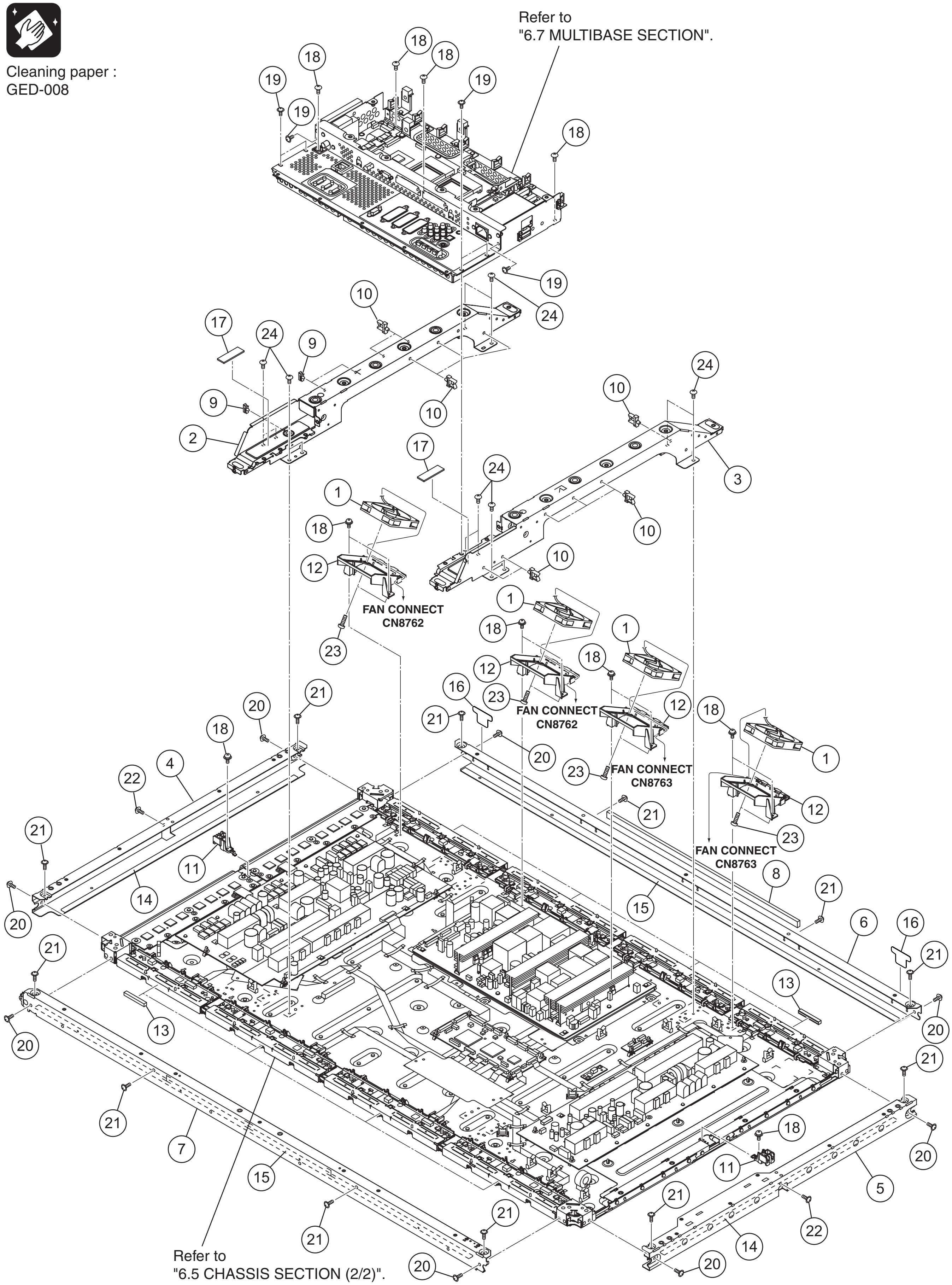
Rear view

FRONT SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	LED Assy	AWW1362
	2	IR Assy	AWW1363
	3	RLS Assy	AWW1365
	4	7/3/3P Housing Wire (J117)	ADX3643
	5	Front Bezel (509HTVE)	AMB3086
	6	Blind Cushion (508F)	AEB1479
	7	Nylon Rivet	AEC1671
	8	Rivet (Plastic)	AEC1877

6.4 CHASSIS SECTION (1/2)

Cleaning paper :
GED-008


Refer to
"6.7 MULTIBASE SECTION".
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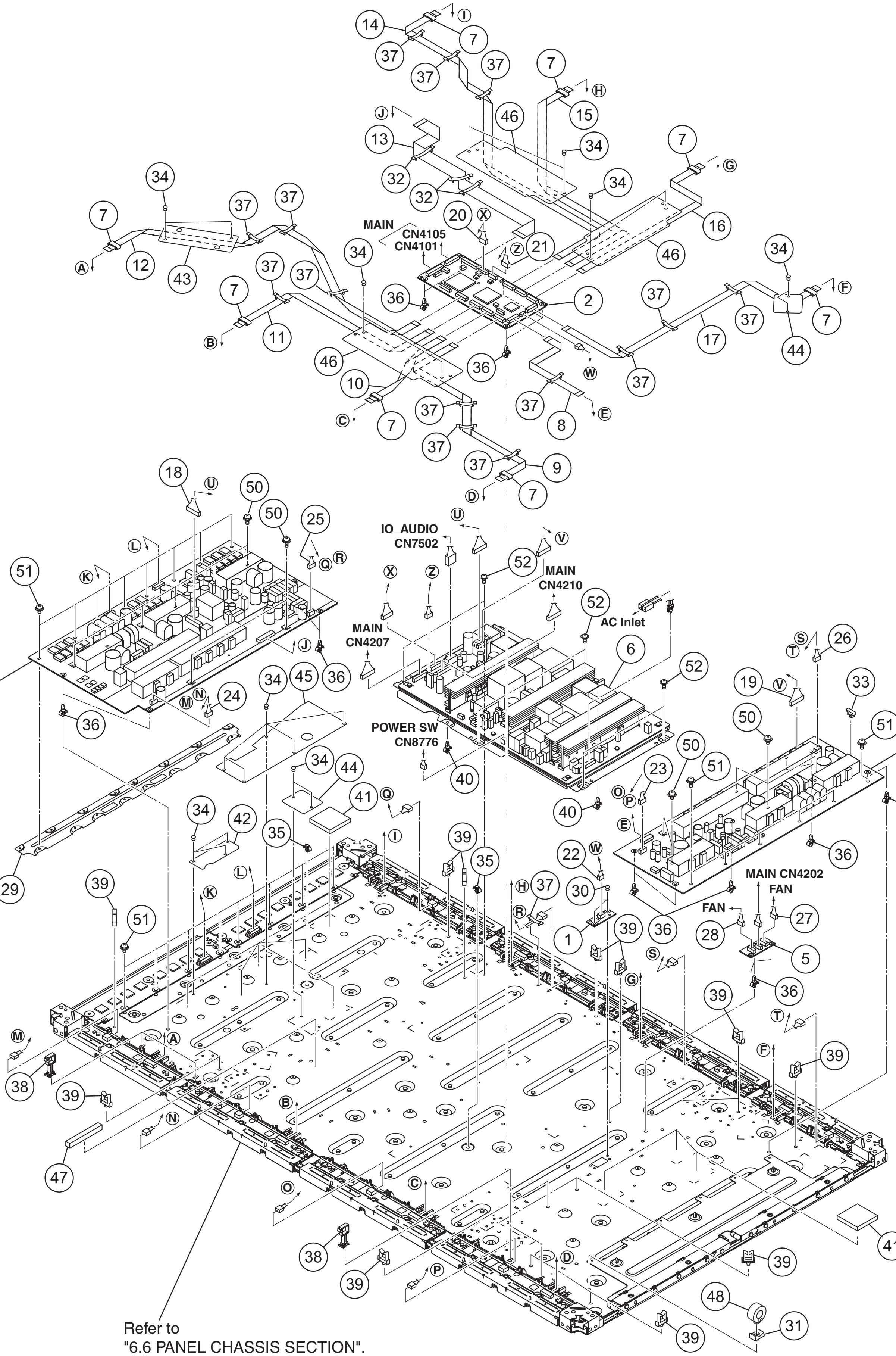
FAN CONNECT
CN8762
FAN CONNECT
CN8763
Refer to
"6.5 CHASSIS SECTION (2/2)".

CHASSIS SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.
⚠	1	DC FAN Motor 80 x 15L	AXM1065
	2	Sub Frame L Assy (50)	ANA2137
	3	Sub Frame R Assy (50)	ANA2140
⚠	4	F. Chassis VL Assy 50	ANA2142
⚠	5	F. Chassis VR Assy 50	ANA2151
⚠	6	F. Chassis HT Assy 50	ANA2144
⚠	7	F. Chassis HB 50	ANA2188
	8	Waterproof Cushion	AEB1495
	9	Wire Clip	AEC1948
	10	Reuse Wire Saddle	AEC2134
	11	Support Bracket	AMR3762
	12	FAN Bracket 80	AMR3787
⚠	13	Gasket ADH-FCH	ANK1850
⚠	14	Front Gasket V50	ANK1963
⚠	15	Front Gasket H50	ANK1964
	16	FC Gate Sheet	AMR3906
	17	Stand Cushion	AED1340
	18	Screw	ABA1351
	19	Screw (M3 x 6)	ABA1377
	20	Screw	ABZ30P080FTC
	21	Screw	AMZ30P060FTB
	22	Screw	APZ30P080FTB
	23	Screw	PPZ50P100FTB
	24	Screw	TBZ40P060FTC

6.5 CHASSIS SECTION (2/2)


MAIN
CN4105
CN4101
IO_AUDIO
CN7502
MAIN
CN4210
AC Inlet
MAIN
CN4207
POWER SW
CN8776
MAIN CN4202
FAN
FAN
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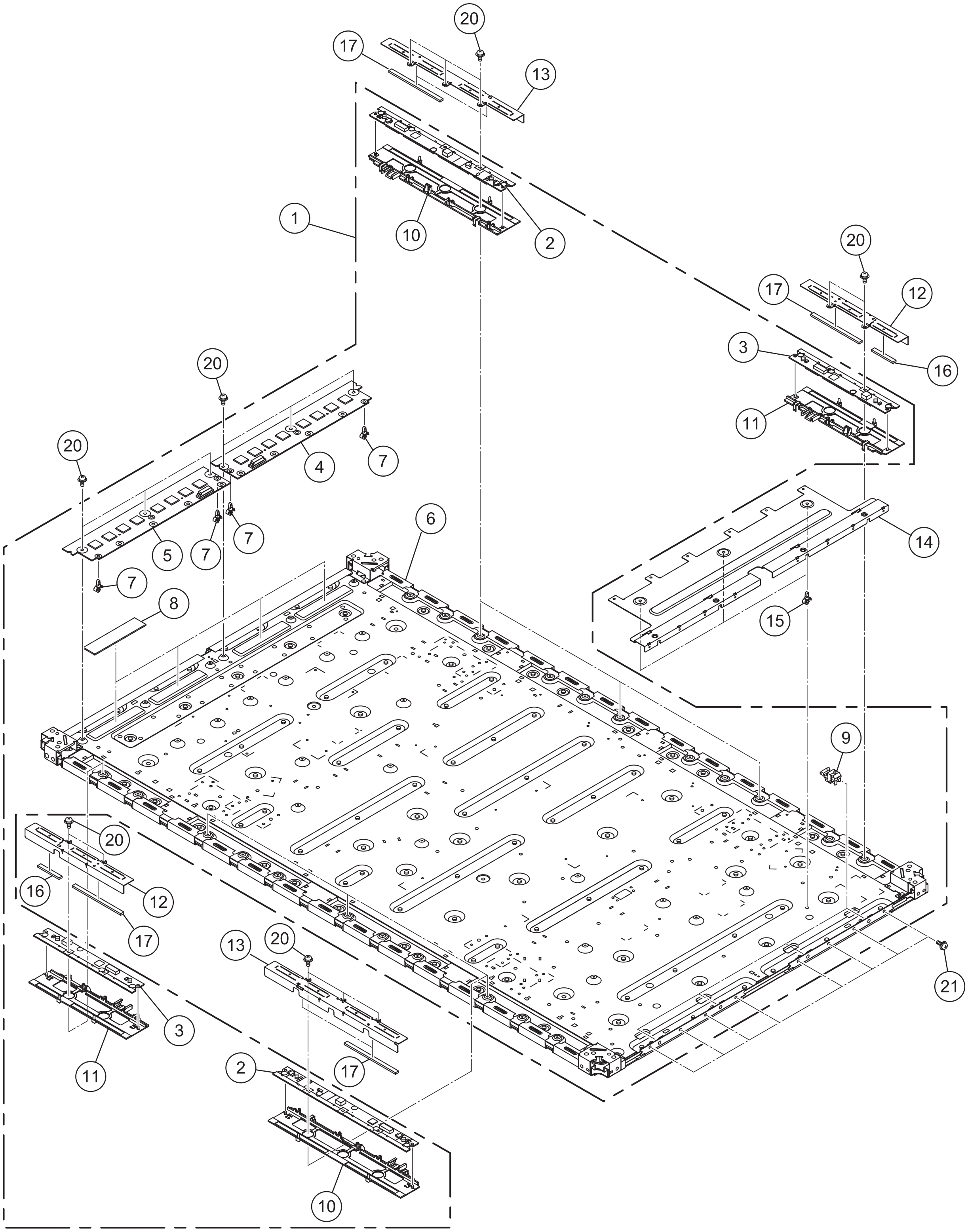
Refer to
"6.6 PANEL CHASSIS SECTION".

CHASSIS SECTION (2/2) PARTS LIST

Mark	No.	Description	Part No.
	1	SENSOR Assy	AWW1340
	2	50F DIGITAL Assy	AWW1347
	3	50F X DRIVE Assy	AWV2546
	4	50F Y DRIVE Assy	AWV2547
	5	FAN CONNECT Assy	AWW1364
⚠	6	POWER SUPPLY Unit	AXY1200
⚠	7	Ferrite Core (F1 - F8)	ATX1072
	8	Flexible Cable (J201)	ADD1540
	9	Flexible Cable (J202)	ADD1541
	10	Flexible Cable (J203)	ADD1542
	11	Flexible Cable (J204)	ADD1543
	12	Flexible Cable (J205)	ADD1544
	13	Flexible Cable (J206)	ADD1545
	14	Flexible Cable (J207)	ADD1546
	15	Flexible Cable (J208)	ADD1547
	16	Flexible Cable (J209)	ADD1548
	17	Flexible Cable (J210)	ADD1549
	18	12P/11P Housing Wire (J101)	ADX3628
	19	11P Housing Wire (J102)	ADX3629
	20	10P Housing Wire (J106)	ADX3632
	21	6P Housing Wire (J107)	ADX3633
	22	5P Housing Wire (J108)	ADX3634
	23	5/3/3P Housing Wire (J112)	ADX3638
	24	5/3/3P Housing Wire (J113)	ADX3639
	25	5/3/3P Housing Wire (J114)	ADX3640
	26	5/3/3P Housing Wire (J115)	ADX3641
	27	6/3/3P Housing Wire (J120)	ADX3646
	28	7/3/3P Housing Wire (J121)	ADX3647
	29	Plate Y (509)	ANG3127
	30	Nylon Rivet	AEC1671
	31	Ferrite Core Holder	AEC1818
	32	Flat Clamp	AEC1879
	33	Wire Clip	AEC1948
	34	Nylon Rivet	AEC2089
	35	Reuse Card Spacer	AEC2117
	36	PCB Spacer (Reuse)	AEC2122
	37	Flat Clamp	AEC2132
	38	Reuse Fastener	AEC2133
	39	Reuse Wire Saddle	AEC2134
	40	Reuse PCB Spacer 4.5	AEC2148
	41	Drive Sheet	AEH1155
	42	Y Drive Sheet B	AMR3769
	43	Y Drive Sheet C	AMR3783
	44	FAN Sheet	AMR3786
	45	Y Drive Sheet A (M)	AMR3881
	46	FFC Sheet	AMR3893
⚠	47	Gasket (10 x 10 x 80)	ANK1974
⚠	48	Ferrite Core (L1)	ATX1044
	49	• • • • •	
	50	Screw	ABA1351
	51	Screw	ABA1364
	52	Screw	ABZ30P060FTB

6.6 PANEL CHASSIS SECTION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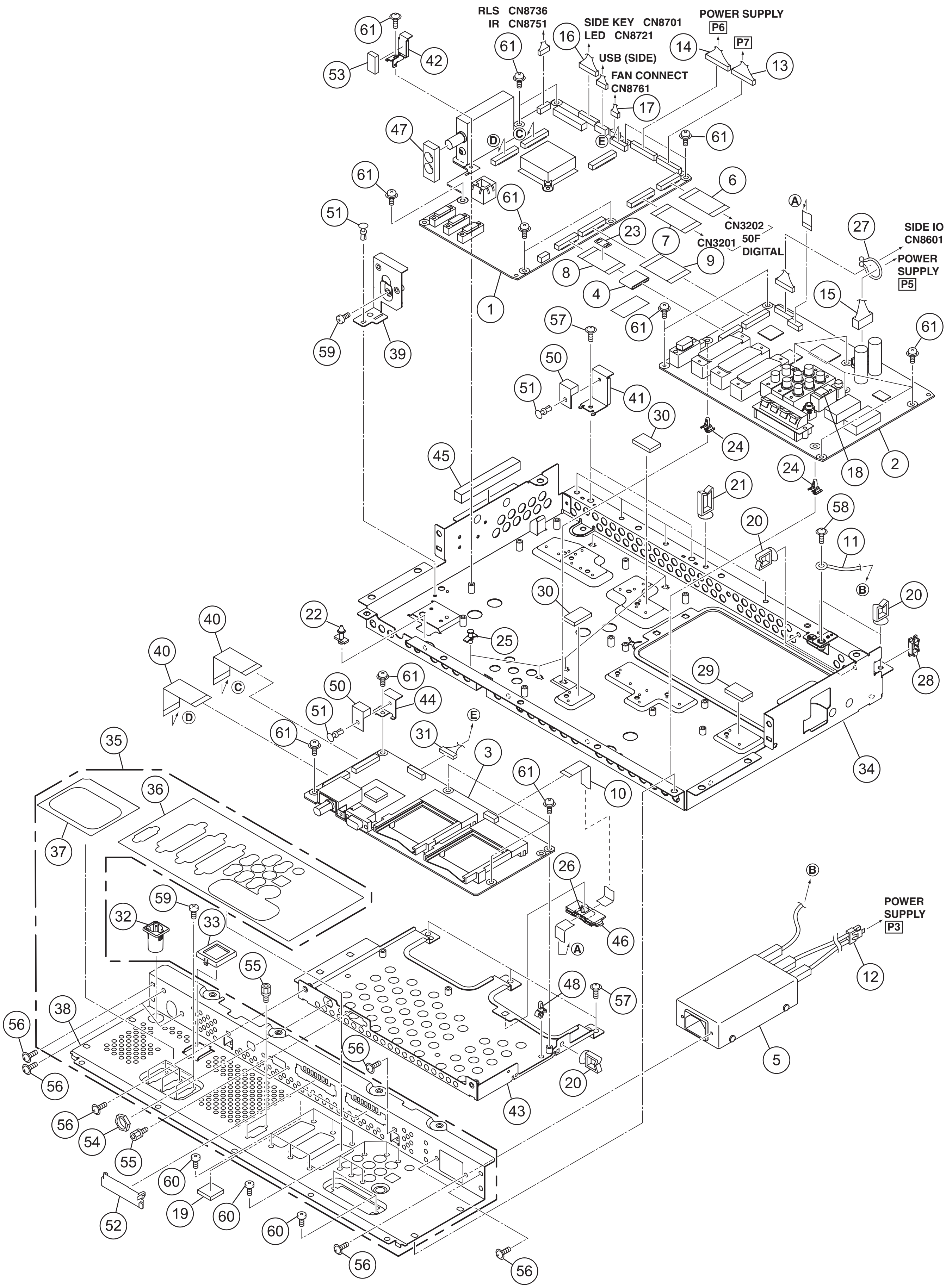
PANEL CHASSIS SECTION PARTS LIST

Mark	No.	Description	Part No.
NSP	1	P. Chassis (509FE) Assy	AWU1297
NSP	2	50F ADDRESS L Assy	AWW1348
NSP	3	50F ADDRESS S Assy	AWW1349
NSP	4	50F SCAN A Assy	AWW1350
NSP	5	50F SCAN B Assy	AWW1351
NSP	6	P. Panel (50FE) Assy	AWU1298
	7	Reuse PCB Spacer 4.5	AEC2148
	8	Heat Radiation Sheet	AEH1134
	9	Plate Holder	AMR3757
	10	Holder L Assy (509)	AMR3775
	11	Holder S Assy (509)	AMR3776
	12	Address Plate S (509)	ANG3129
	13	Address Plate L (509)	ANG3130
	14	Plate X (509)	ANG3128
	15	PCB Spacer (Reuse)	AEC2122
	16	Address Silicon TS	AEH1160
	17	Address Silicon TL	AEH1161
	18	• • • • •	
	19	• • • • •	
	20	Screw	ABA1351
	21	Screw	ABA1364

6.7 MULTIBASE SECTION


RLS CN8736
IR CN8751
SIDE KEY CN8701
LED CN8721
USB (SIDE)
FAN CONNECT
CN8761
POWER SUPPLY
P6
P7
CN3202
CN3201
50F
DIGITAL
SIDE IO
CN8601
POWER
SUPPLY
P5
POWER
SUPPLY
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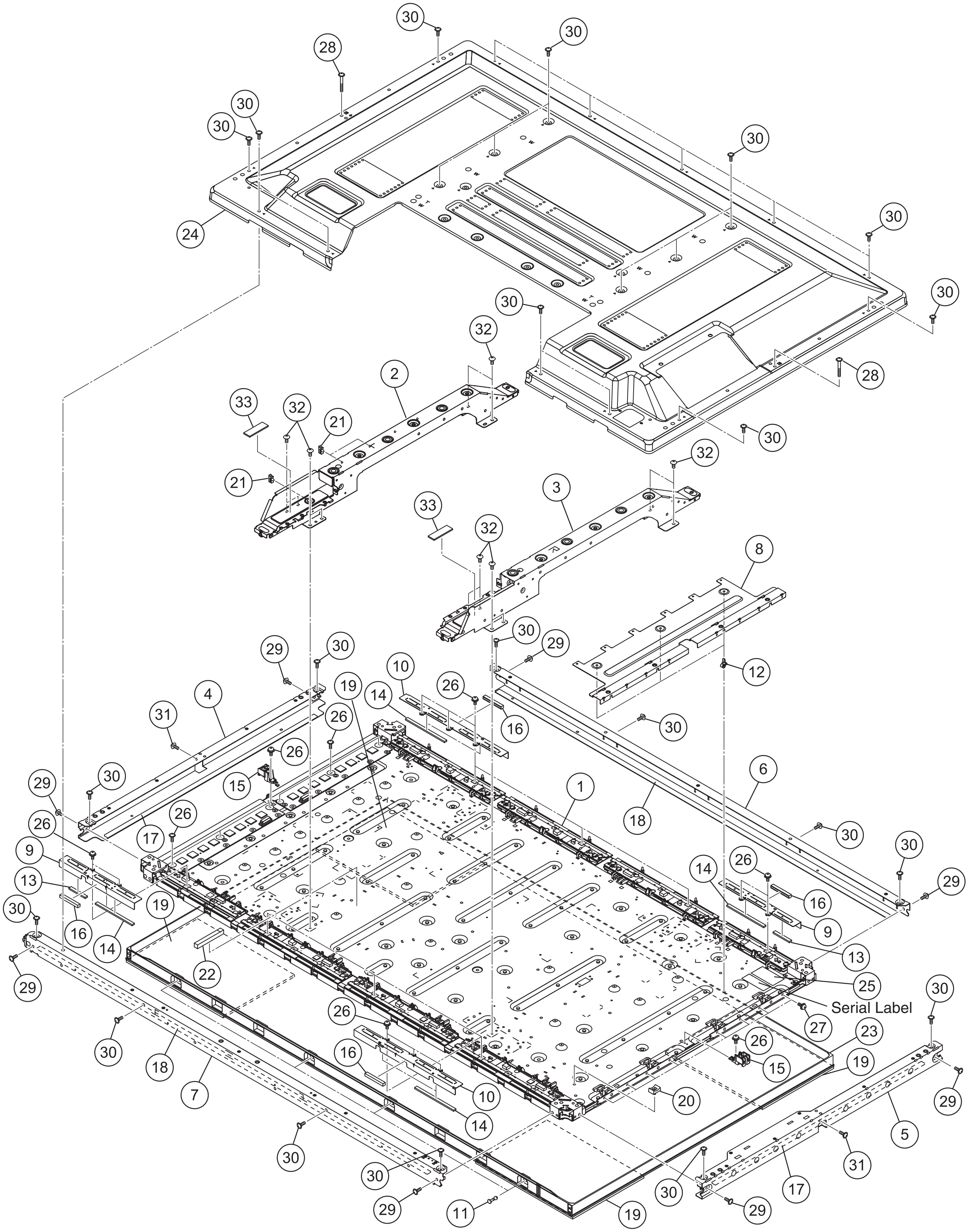
MULTIBASE SECTION PARTS LIST

Mark	No.	Description	Part No.
⚠	1	MAIN Assy	AWV2556
	2	IO_AUDIO Assy	AWW1354
	3	CARD Assy	AWV2558
⚠	4	Ferrite Core (F11)	ATX1048
⚠	5	AC Inlet (CN1)	AKP1336
	6	Flexible Cable (J211)	ADD1533
	7	Flexible Cable (J212)	ADD1534
	8	Flexible Cable (J213)	ADD1535
	9	Flexible Cable (J214)	ADD1536
	10	Flexible Cable (J215)	ADD1563
⚠	11	Housing Wire (J105)	ADX3608
⚠	12	Housing Wire (J104)	ADX3631
	13	14P Housing Wire (J109)	ADX3635
	14	15P Housing Wire (J110)	ADX3636
	15	5P Housing Wire (J111)	ADX3637
	16	10/6/4P Housing Wire (J116)	ADX3642
	17	4P Housing Wire (J119)	ADX3645
	18	Rubber Sheet	AEB1498
	19	Cushion	AEB1499
	20	Wire Saddle	AEC1745
	21	Wire Saddle	AEC1797
	22	Circuit Board Spacer	AEC1872
	23	Ferrite Stopper	AEC1981
	24	Reuse PCB Spacer 4.5	AEC2136 or AEC2161
	25	PCB Spacer	AEC2146
⚠	26	Ferrite Core (F12)	ATX1073
	27	Clamp	AEC2156
	28	Edge Holder	AEC2159
	29	Silicon Sheet MTB A	AEH1174
	30	Silicon Sheet MTB B	AEH1175
	31	9P Housing Wire (J124)	ADX3627
	32	Sleeve	AMR3771
	33	Ether Cover	AMR3789
	34	MTB Assy	ANA2150
	35	1..T Panel EH Assy	ANC2471
	36	2..Label B1 (ES)	AAX3573
	37	2..Label B2 (EH)	AAX3585
	38	2..Terminal Panel (EH)	ANC2466
	39	Tuner Panel (EH)	ANG3149
	40	Flexible Cable (J216, J217)	ADD1539
	41	Earth BKT A	ANG3182
	42	Earth BKT C	ANG3184
	43	Sub Multi Chassis	ANG3148
	44	Earth BKT D	ANG3185
⚠	45	Gasket (10 x 10 x 80)	ANK1974
	46	Ferrite Clamp	AEC1986
⚠	47	Gasket (E)	ANK1981
	48	PCB Spacer (Reuse)	AEC2122
	49	• • • • •	
⚠	50	Gasket (10 x 8 x 15)	ANK1982
	51	Nylon Rivet	AEC1671
	52	Card Lid	AMR3772
⚠	53	Gasket (10 x 5 x 20)	ANK1976
	54	Washer Faced Nut	BBN1005
	55	Hexagon Headed Screw	ABA1382
	56	Screw (M3 x 6)	ABA1377
	57	Screw	AMZ30P060FTB
	58	Screw	BMP40P080FSN
	59	Screw	BMZ30P060FTB
	60	Screw	BPZ30P080FTB
	61	Screw	PMB30P060FNI

6.8 PDP SERVICE ASSY

PDP SERVICE ASSY 509FE : AWU1342

● Exterior Section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Serial Label
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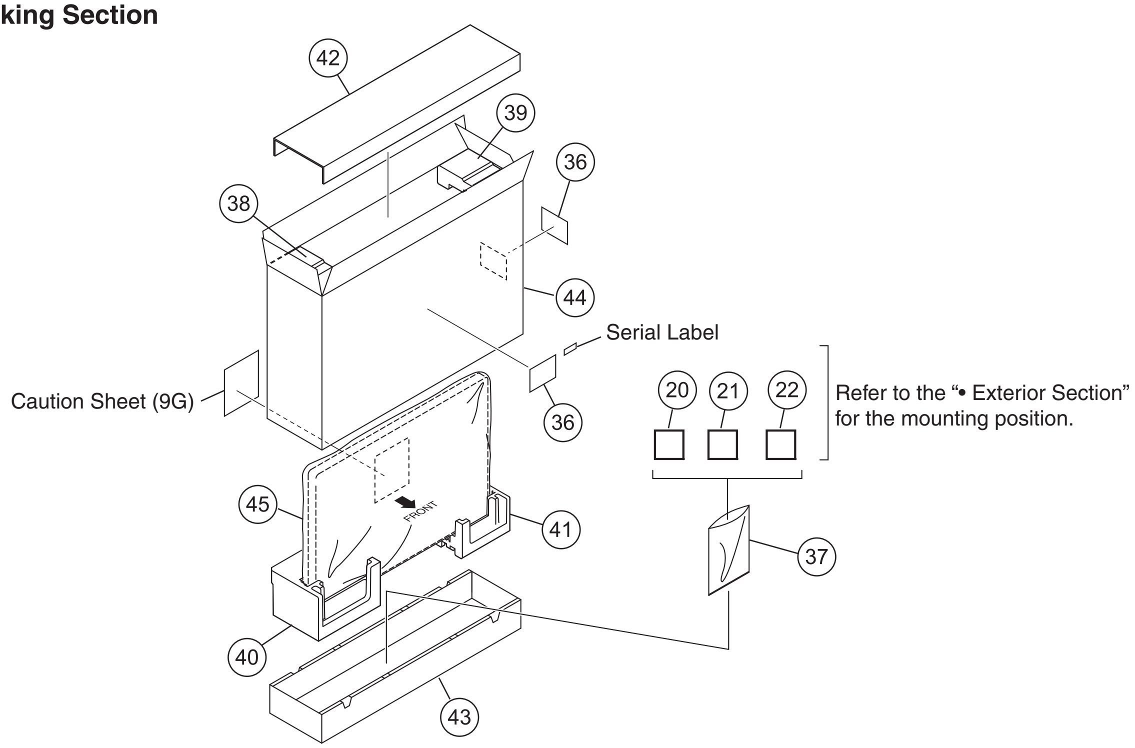
● Packing Section

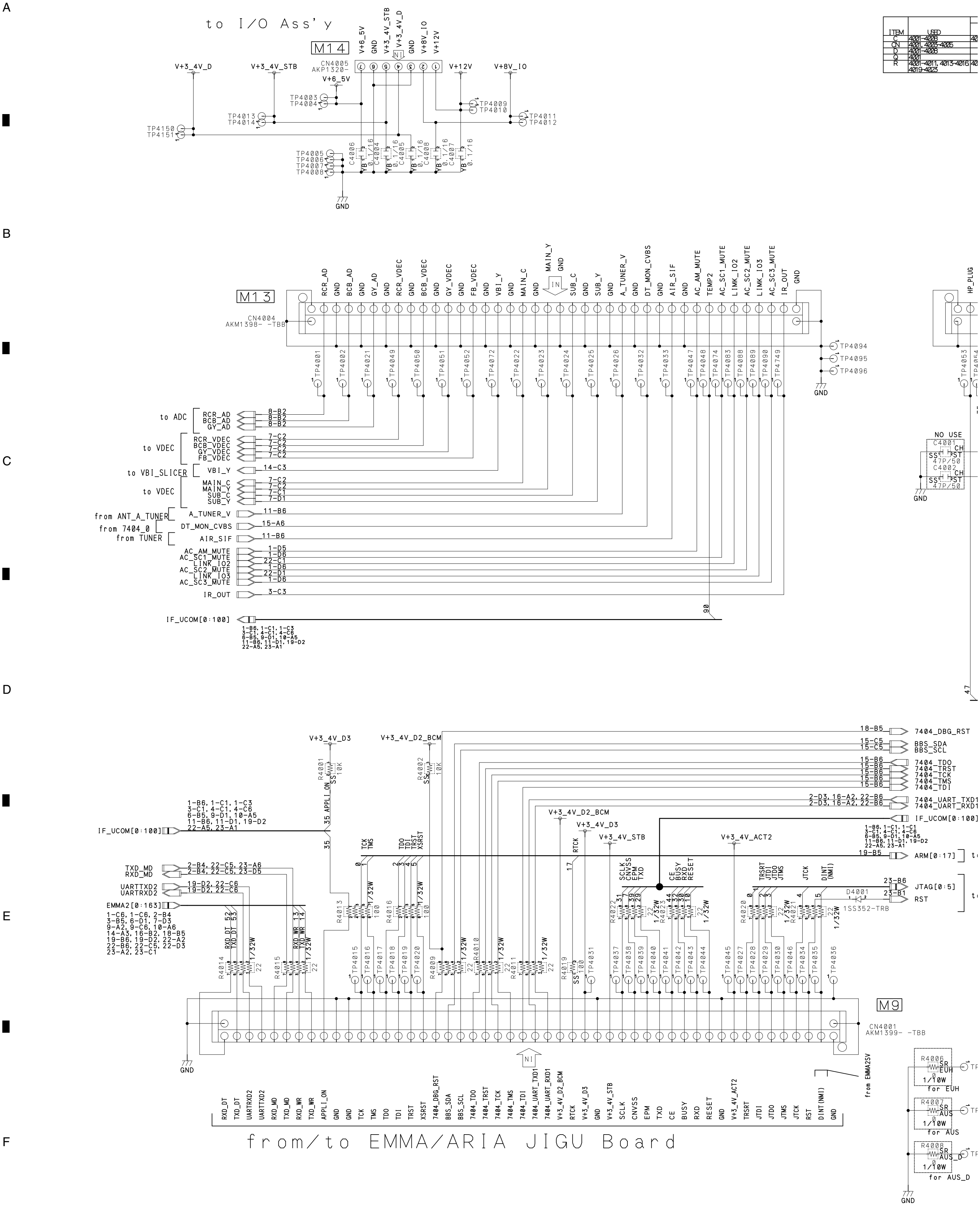


PDP SERVICE ASSY PARTS LIST

Mark	No.	Description	Part No.
NSP	1	P. Chassis (509FE) Assy	AWU1297
	2	Sub Frame L Assy (50)	ANA2137
	3	Sub Frame R Assy (50)	ANA2140
	4	F. Chassis VL Assy 50	ANA2142
	5	F. Chassis VR Assy 50	ANA2151
	6	F. Chassis HT Assy 50	ANA2144
	7	F. Chassis HB 50	ANA2188
	8	Plate X (509)	ANG3128
	9	Address Plate S (509)	ANG3129
	10	Address Plate L (509)	ANG3130
	11	Rivet (Plastic)	AEC1877
	12	PCB Spacer (Reuse)	AEC2122
	13	Address Silicon TS	AEH1160
	14	Address Silicon TL	AEH1161
	15	Support Bracket	AMR3762
	16	Gasket ADH-FCH	ANK1850
	17	Front Gasket V50	ANK1963
	18	Front Gasket H50	ANK1964
	19	Service Pad	AEC2105
	20	Ferrite Core Holder	AEC1818
	21	Wire Clip	AEC1948
	22	Gasket (10 x 10 x 80)	ANK1974
NSP	23	Front Service Assy (509)	AMB3103
	24	Rear Case (509)	ANE1671
NSP	25	Drive Voltage Label	ARW1097
	26	Screw	ABA1351
	27	Screw	ABA1364
	28	Screw (3 x 25 P)	ABA1380
	29	Screw	ABZ30P080FTC
	30	Screw	AMZ30P060FTB
	31	Screw	APZ30P080FTB
	32	Screw	TBZ40P060FTC
	33	Stand Cushion	AED1340
	34	• • • • •	
	35	• • • • •	
	36	Caution Label	AAX3031
	37	Vinyl Bag	AHG1338
	38	Pad (509 T-L EU)	AHA2727
	39	Pad (509 T-R EU)	AHA2728
	40	Pad (509 B-L EU)	AHA2729
	41	Pad (509 B-R EU)	AHA2730
	42	Carton Board (509)	AHB1303
	43	Under Carton (5090)	AHD3673
	44	Upper Carton (509F-SV)	AHD3716
	45	Protect Sheet	AHG1331

7. SCHEMATIC DIAGRAM

7.1 MAIN ASSY (1/24) [BOARD_IF_0 BLOCK]



A
B
C
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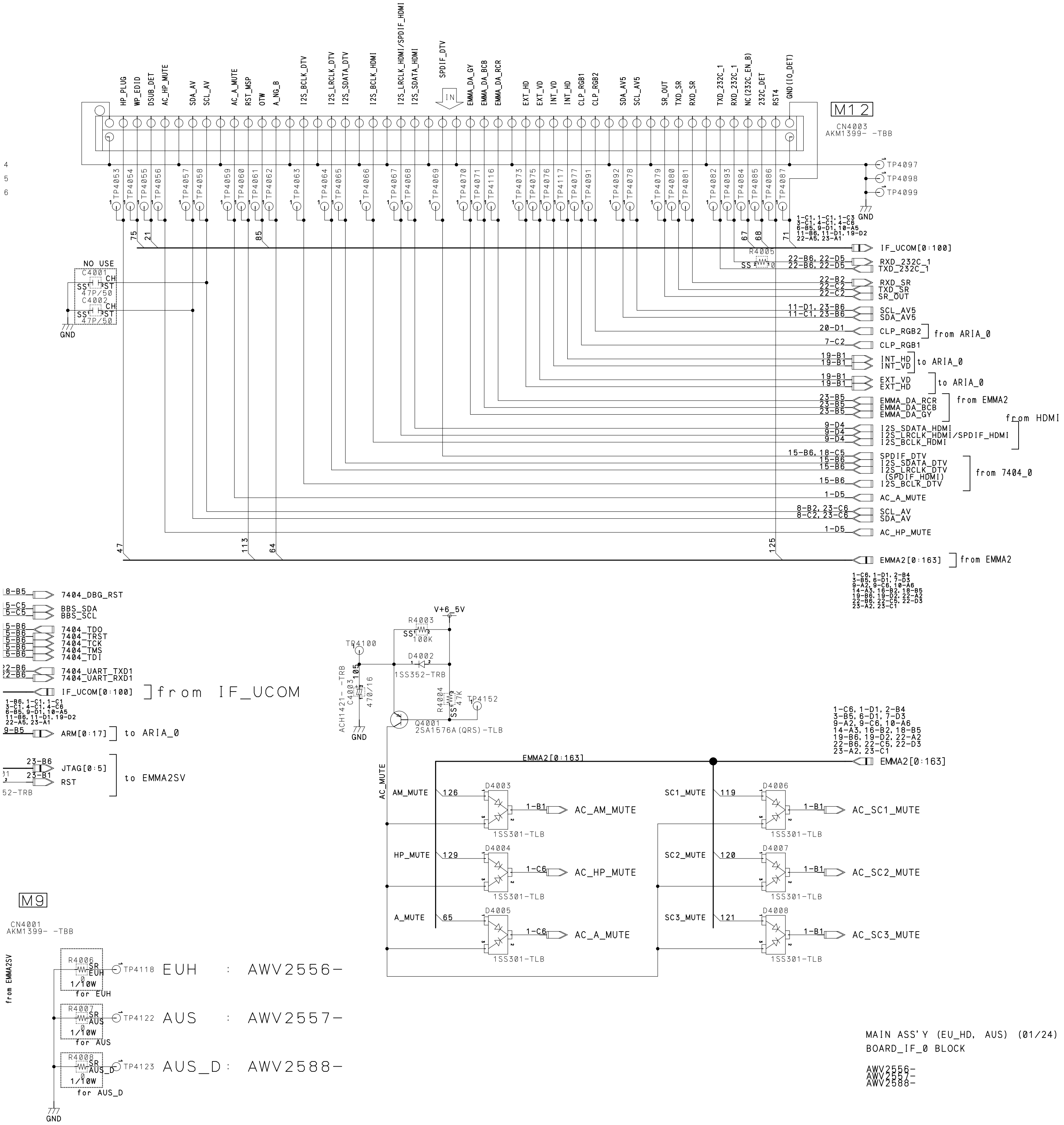
F
to I/O Ass'y
M14
CN4005
AKP1320-
V+6_5V
GND
V+3_4V_STB
V+3_4V_D
GND
V+8V_IO
V+12V
V+3_4V_D
V+3_4V_STB
V+6_5V
V+12V
V+8V_IO
TP4003
TP4004
TP4009
TP4010
TP4013
TP4014
TP4011
TP4012
TP4150
TP4151
TP4005
TP4006
TP4007
TP4008
C4006
C4004
C4005
C4008
C4007
0.1/16
GND
ITEM
USED
C 4001-4006
CN 4001, 4003-4005
D 4001-4008
IC 4001
R 4001-4011, 4013-4016, 4019-4023
M13
CN4004
AKM1398- -TBB
RCR_AD
GND
BCB_AD
GND
GY_AD
GND
RCR_VDEC
GND
BCB_VDEC
GND
GY_VDEC
GND
FB_VDEC
GND
VBI_Y
GND
MAIN_C
GND
MAIN_Y
GND
IN
SUB_C
GND
SUB_Y
GND
A_TUNER_V
GND
DT_MON_CVBS
GND
AIR_SIF
GND
AC_AM_MUTE
TEMP2
AC_SC1_MUTE
LIMK_IO2
AC_SC2_MUTE
LIMK_IO3
AC_SC3_MUTE
IR_OUT
GND
HP_PLUG
TP4001
TP4002
TP4021
TP4049
TP4050
TP4051
TP4052
TP4072
TP4022
TP4023
TP4024
TP4025
TP4026
TP4032
TP4033
TP4047
TP4048
TP4074
TP4083
TP4088
TP4089
TP4090
TP4749
TP4094
TP4095
TP4096
TP4053
to ADC
RCR_AD 8-B2
BCB_AD 8-B2
GY_AD 8-B2
to VDEC
RCR_VDEC 7-C2
BCB_VDEC 7-C2
GY_VDEC 7-C2
FB_VDEC 7-C2
to VBI_SLICER
VBI_Y 14-C3
to VDEC
MAIN_C 7-C2
MAIN_Y 7-C2
SUB_C 7-C1
SUB_Y 7-D1
from ANT_A_TUNER
A_TUNER_V 11-B6
from 7404_0
DT_MON_CVBS 15-A6
from TUNER
AIR_SIF 11-B6
AC_AM_MUTE 1-D5
AC_SC1_MUTE 1-D6
LINK_IO2 22-C1
AC_SC2_MUTE 1-D6
LINK_IO3 22-D1
AC_SC3_MUTE 1-D6
IR_OUT 3-C3
IF_UCOM[0:100]
90
1-B6, 1-C1, 1-C3
3-C1, 4-C1, 4-C6
6-B5, 9-D1, 10-A5
11-B6, 11-D1, 19-D2
22-A5, 23-A1
NO USE
C4001
CH
SS 3ST
47P/50
C4002
47
V+3_4V_D3
V+3_4V_D2_BCM
R4001
10K
R4002
10K
35 APPLI_ON
35
18-B5 7404_DBG_RST
15-C5 BBS_SDA
15-C5 BBS_SCL
15-B6 7404_TDO
15-B6 7404_TRST
15-B6 7404_TCK
15-B6 7404_TMS
15-B6 7404_TDI
2-D3, 16-A2, 22-B6 7404_UART_TXD1
2-D3, 16-A2, 22-B6 7404_UART_RXD1
IF_UCOM[0:100]
V+3_4V_D2_BCM
V+3_4V_D3
V+3_4V_STB
V+3_4V_ACT2
19-B5 ARM[0:17]
23-B6 JTAG[0:5]
23-B1 RST
D4001
1SS352-TRB
TXD_MD 2-B4, 22-C5, 23-A6
RXD_MD 2-B4, 22-C5, 23-D5
UARTTXD2 19-D2, 22-C6
UARTRXD2 19-D2, 22-C6
EMMA2[0:163]
1-C6, 1-C6, 2-B4
3-B5, 6-D1, 7-D3
9-A2, 9-C6, 10-A6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
TCK
TMS
TDO
TDI
TRST
XSRST
RTCK
17
SCLK
CNVSS
EPM
TXD
CE
BUSY
RXD
RESET
TRSRT
JTDI
JTDO
JTMS
JTCK
DINT (NMI)
RXD_DT 52
TXD_DT 53
RXD_WR 13
TXD_WR 14
R4013
R4016
R4022
R4023
R4020
R4021
R4014
R4015
R4009
R4010
R4011
R4019
1/32W
22
100
TP4015
TP4016
TP4017
TP4018
TP4019
TP4020
TP4031
TP4037
TP4038
TP4039
TP4040
TP4041
TP4042
TP4043
TP4044
TP4045
TP4027
TP4028
TP4029
TP4030
TP4046
TP4034
TP4035
TP4036
M9
CN4001
AKM1399- -TBB
NI
GND
from EMMA2SV
RXD_DT
TXD_DT
UARTRXD2
UARTTXD2
RXD_MD
TXD_MD
RXD_WR
TXD_WR
APPLI_ON
GND
GND
TCK
TMS
TDO
TDI
TRST
XSRST
7404_DBG_RST
BBS_SDA
BBS_SCL
7404_TDO
7404_TRST
7404_TCK
7404_TMS
7404_TDI
7404_UART_TXD1
7404_UART_RXD1
V+3_4V_D2_BCM
RTCK
V+3_4V_D3
GND
V+3_4V_STB
SCLK
CNVSS
EPM
TXD
CE
BUSY
RXD
RESET
GND
V+3_4V_ACT2
TRSRT
JTDI
JTDO
JTMS
JTCK
RST
DINT(NMI)
GND
from/to EMMA/ARIA JIGU Board
R4006
SR
EUH
1/10W
for EUH
R4007
AUS
for AUS
R4008
AUS_D
for AUS_D
GND

ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	4001-4008	4001, 4002	4001, 4002	4001, 4002
CN	4001, 4003-4005			
D	4001-4008			
Q	4001			
R	4001-4011, 4013-4016, 4019-4023	4007, 4008	4006, 4008	4006, 4007

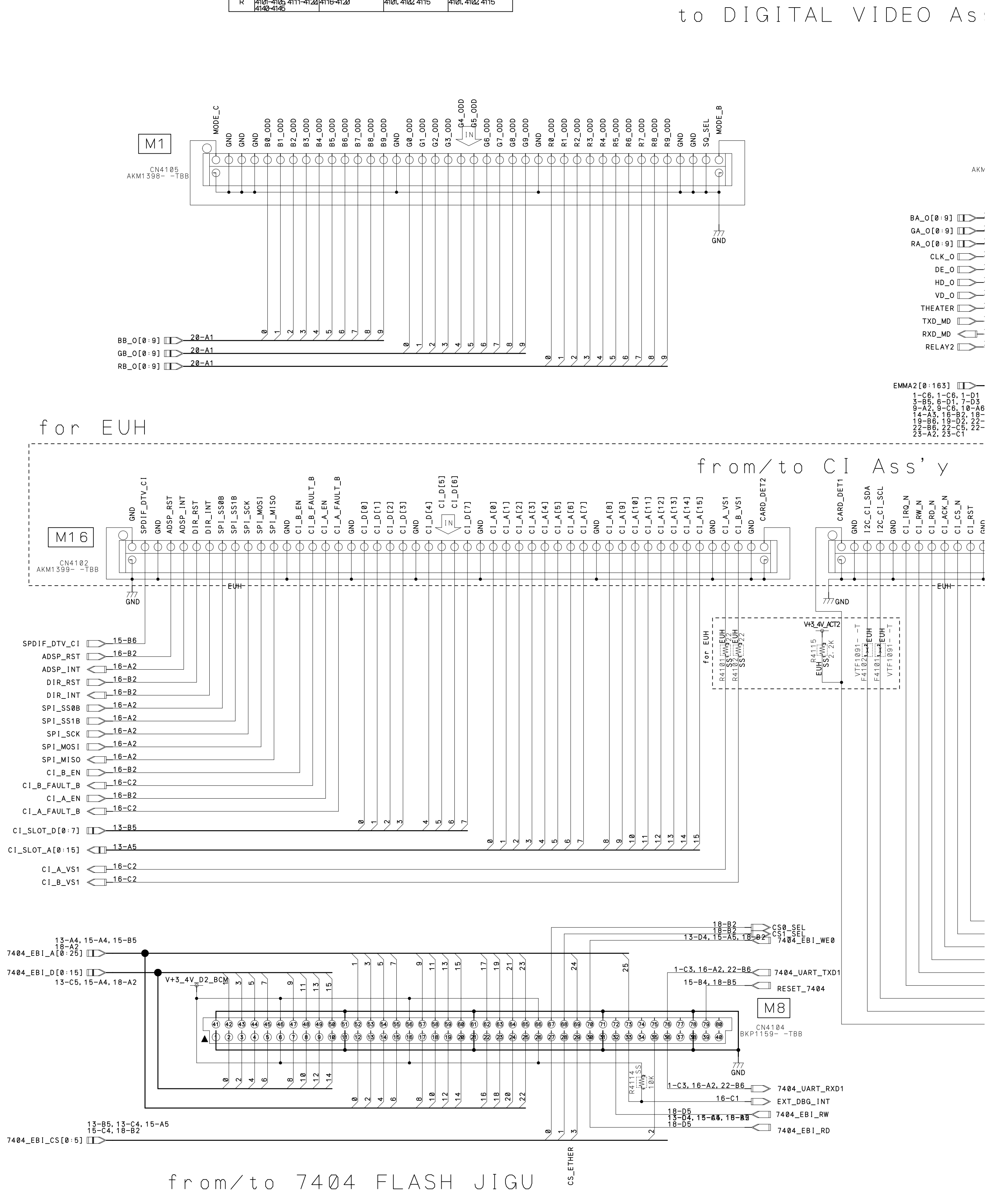

HP_PLUG
WP_EDID
DSUB_DET
AC_HP_MUTE
SDA_AV
SCL_AV
AC_A_MUTE
RST_MSP
OTW
A_NG_B
I2S_BCLK_DTV
I2S_LRCLK_DTV
I2S_SDATA_DTV
I2S_BCLK_HDMI
I2S_LRCLK_HDMI/SPDIF_HDMI
I2S_SDATA_HDMI
SPDIF_DTV
IN
EMMA_DA_GY
EMMA_DA_BCB
EMMA_DA_RCR
EXT_HD
EXT_VD
INT_VD
INT_HD
CLP_RGB1
CLP_RGB2
SDA_AV5
SCL_AV5
SR_OUT
TXD_SR
RXD_SR
TXD_232C_1
RXD_232C_1
NC(232C_EN_B)
232C_DET
RST4
GND(IO_DET)
M12
CN4003
AKM1399- -TBB
TP4053 TP4054 TP4055 TP4056 TP4057 TP4058 TP4059 TP4060 TP4061 TP4062 TP4063 TP4064 TP4065 TP4066 TP4067 TP4068 TP4069 TP4070 TP4071 TP4116 TP4073 TP4075 TP4076 TP4117 TP4077 TP4091 TP4092 TP4078 TP4079 TP4080 TP4081 TP4082 TP4093 TP4084 TP4085 TP4086 TP4087
TP4097
TP4098
TP4099
GND
75
21
85
67
68
71
1-C1, 1-C1, 1-C3
3-C1, 4-C1, 4-C6
6-B5, 9-D1, 10-A5
11-B6, 11-D1, 19-D2
22-A5, 23-A1
IF_UCOM[0:100]
R4005
SS
10
22-B6, 22-D5
RXD_232C_1
22-B6, 22-D5
TXD_232C_1
22-B2
RXD_SR
22-C2
TXD_SR
22-C2
SR_OUT
11-D1, 23-B6
SCL_AV5
11-C1, 23-B6
SDA_AV5
20-D1
CLP_RGB2
from ARIA_0
7-C2
CLP_RGB1
19-B1
INT_HD
19-B1
INT_VD
to ARIA_0
19-B1
EXT_VD
19-B1
EXT_HD
to ARIA_0
23-B5
EMMA_DA_RCR
23-B5
EMMA_DA_BCB
23-B5
EMMA_DA_GY
from EMMA2
from HDMI
9-D4
I2S_SDATA_HDMI
9-D4
I2S_LRCLK_HDMI/SPDIF_HDMI
9-D4
I2S_BCLK_HDMI
15-B6, 18-C5
SPDIF_DTV
15-B6
I2S_SDATA_DTV
15-B6
I2S_LRCLK_DTV
(SPDIF_HDMI)
15-B6
I2S_BCLK_DTV
from 7404_0
1-D5
AC_A_MUTE
8-B2, 23-C6
SCL_AV
8-C2, 23-C6
SDA_AV
1-D5
AC_HP_MUTE
47
113
64
125
EMMA2[0:163]
from EMMA2
1-C6, 1-D1, 2-B4
3-B5, 6-D1, 7-D3
9-A2, 9-C6, 10-A6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
NO USE
C4001
CH
SS
ST
47P/50
C4002
CH
SS
ST
47P/50
GND
8-B5
7404_DBG_RST
5-C5
BBS_SDA
5-C5
BBS_SCL
5-B6
7404_TDO
5-B6
7404_TRST
5-B6
7404_TCK
5-B6
7404_TMS
5-B6
7404_TDI
22-B6
7404_UART_TXD1
22-B6
7404_UART_RXD1
IF_UCOM[0:100]
from IF_UCOM
1-B6, 1-C1, 1-C1
3-C1, 4-C1, 4-C6
6-B5, 9-D1, 10-A5
11-B6, 11-D1, 19-D2
22-A5, 23-A1
9-B5
ARM[0:17]
to ARIA_0
23-B6
JTAG[0:5]
23-B1
RST
to EMMA2SV
52-TRB
V+6_5V
R4003
SS
100K
TP4100
D4002
1SS352-TRB
ACH1421- -TRB
C4003
105
470/16
GND
R4004
SS
47K
TP4152
Q4001
2SA1576A(QRS)-TLB
AC_MUTE
EMMA2[0:163]
1-C6, 1-D1, 2-B4
3-B5, 6-D1, 7-D3
9-A2, 9-C6, 10-A6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
EMMA2[0:163]
AM_MUTE
126
D4003
1-B1
AC_AM_MUTE
1SS301-TLB
HP_MUTE
129
D4004
1-C6
AC_HP_MUTE
1SS301-TLB
A_MUTE
65
D4005
1-C6
AC_A_MUTE
1SS301-TLB
SC1_MUTE
119
D4006
1-B1
AC_SC1_MUTE
1SS301-TLB
SC2_MUTE
120
D4007
1-B1
AC_SC2_MUTE
1SS301-TLB
SC3_MUTE
121
D4008
1-B1
AC_SC3_MUTE
1SS301-TLB
M9
CN4001
AKM1399- -TBB
from EMMA2SV
R4006
SR
EUH
0
1/10W
for EUH
TP4118
EUH : AWV2556-
R4007
SR
AUS
0
1/10W
for AUS
TP4122
AUS : AWV2557-
R4008
SR
AUS_D
0
1/10W
for AUS_D
TP4123
AUS_D: AWV2588-
GND

MAIN ASS'Y (EU_HD, AUS) (01/24)
BOARD_IF_0 BLOCK

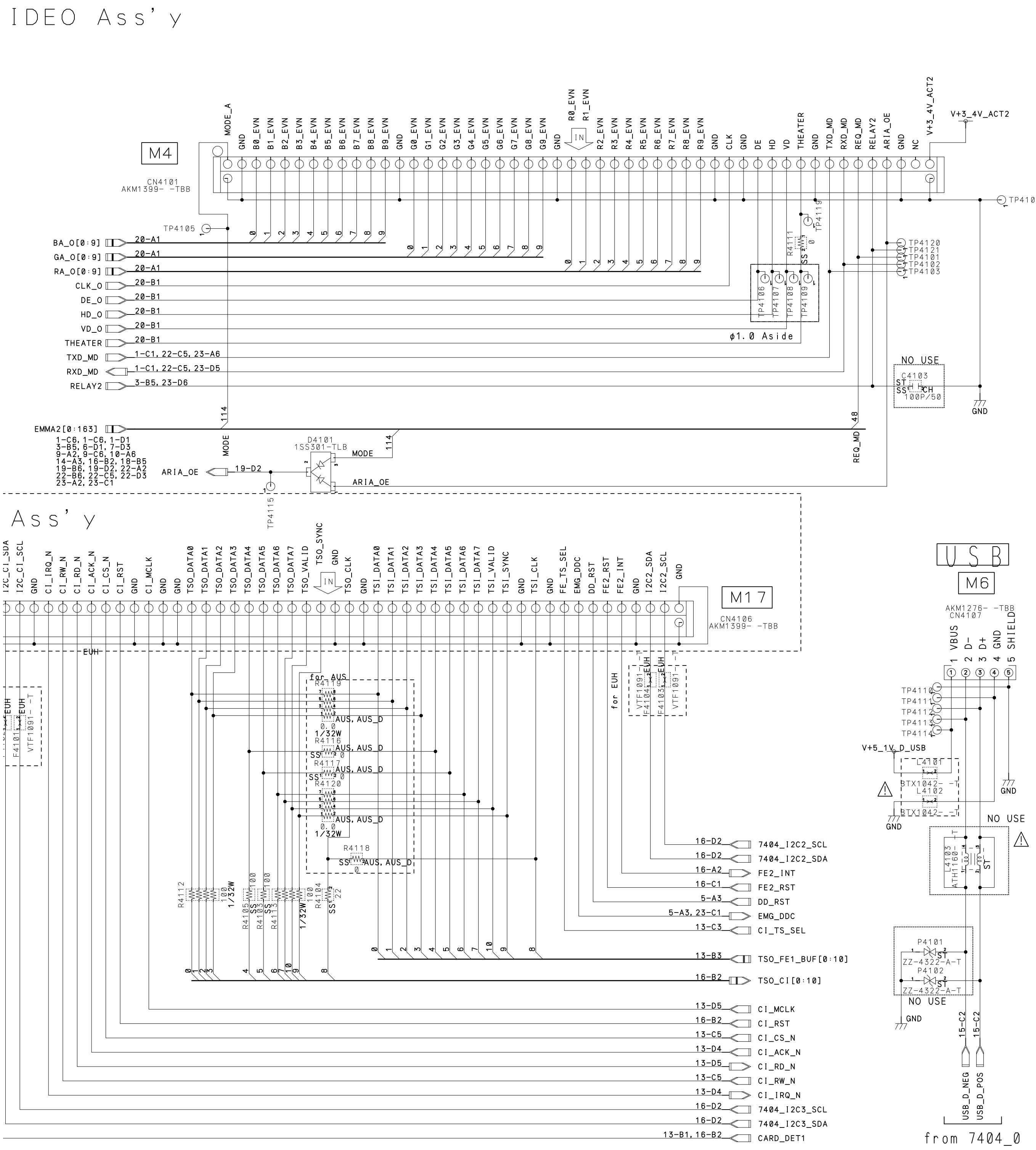
AWV2556-
AWV2557-
AWV2588-

7.2 MAIN ASSY (2/24) [BOARD_IF_1 BLOCK]

ITEM	USED	VACANT EUH AWV2556–	 AUS AWV2557–	 AUS_D AWV2588–
C	4103	4103	4103	4103
CN	4101, 4102, 4104–4107		4102, 4106	4102, 4106
D	4101			
F	4101–4104		4101–4104	4101–4104
P	4101, 4102	4101, 4102	4101, 4102	4101, 4102
R	4101–4105, 4111–4120, 4140–4145	4116–4120	4101, 4102, 4115	4101, 4102, 4115



to DIGITAL VIDEO As
M1
CN4105
AKM1398- -TBB
MODE_C
GND
B0_ODD
B1_ODD
B2_ODD
B3_ODD
B4_ODD
B5_ODD
B6_ODD
B7_ODD
B8_ODD
B9_ODD
G0_ODD
G1_ODD
G2_ODD
G3_ODD
G4_ODD
G5_ODD
IN
G6_ODD
G7_ODD
G8_ODD
G9_ODD
R0_ODD
R1_ODD
R2_ODD
R3_ODD
R4_ODD
R5_ODD
R6_ODD
R7_ODD
R8_ODD
R9_ODD
SQ_SEL
MODE_B
GND
AKM
BA_O[0:9]
GA_O[0:9]
RA_O[0:9]
CLK_O
DE_O
HD_O
VD_O
THEATER
TXD_MD
RXD_MD
RELAY2
BB_O[0:9] 20-A1
GB_O[0:9] 20-A1
RB_O[0:9] 20-A1
EMMA2[0:163]
1-C6, 1-C6, 1-D1
3-B5, 6-D1, 7-D3
9-A2, 9-C6, 10-A6
14-A3, 16-B2, 18-
19-B6, 19-D2, 22-
22-B6, 22-C5, 22-
23-A2, 23-C1
for EUH
from/to CI Ass'y
M16
CN4102
AKM1399- -TBB
SPDIF_DTV_CI
ADSP_RST
ADSP_INT
DIR_RST
DIR_INT
SPI_SS0B
SPI_SS1B
SPI_SCK
SPI_MOSI
SPI_MISO
CI_B_EN
CI_B_FAULT_B
CI_A_EN
CI_A_FAULT_B
CI_D[0]
CI_D[1]
CI_D[2]
CI_D[3]
CI_D[4]
CI_D[5]
CI_D[6]
CI_D[7]
CI_A[0]
CI_A[1]
CI_A[2]
CI_A[3]
CI_A[4]
CI_A[5]
CI_A[6]
CI_A[7]
CI_A[8]
CI_A[9]
CI_A[10]
CI_A[11]
CI_A[12]
CI_A[13]
CI_A[14]
CI_A[15]
CI_A_VS1
CI_B_VS1
CARD_DET2
CARD_DET1
I2C_CI_SDA
I2C_CI_SCL
CI_IRQ_N
CI_RW_N
CI_RD_N
CI_ACK_N
CI_CS_N
CI_RST
EUH
SPDIF_DTV_CI 15-B6
ADSP_RST 16-B2
ADSP_INT 16-A2
DIR_RST 16-B2
DIR_INT 16-B2
SPI_SS0B 16-A2
SPI_SS1B 16-A2
SPI_SCK 16-A2
SPI_MOSI 16-A2
SPI_MISO 16-A2
CI_B_EN 16-B2
CI_B_FAULT_B 16-C2
CI_A_EN 16-B2
CI_A_FAULT_B 16-C2
CI_SLOT_D[0:7] 13-B5
CI_SLOT_A[0:15] 13-A5
CI_A_VS1 16-C2
CI_B_VS1 16-C2
for EUH
R4101 EUH
R4102 EUH
SS 1/16W 22
V+3_4V_ACT2
R4115 EUH
SS 1/16W 2.2K
VTF1091- -T
F4102 EUH
F4101 EUH
13-A4, 15-A4, 15-B5
18-A2
7404_EBI_A[0:25]
7404_EBI_D[0:15]
13-C5, 15-A4, 18-A2
V+3_4V_D2_BCM
M8
CN4104
BKP1159- -TBB
18-B2 CS0_SEL
18-B2 CS1_SEL
13-D4, 15-A5, 18-B2 7404_EBI_WE0
1-C3, 16-A2, 22-B6 7404_UART_TXD1
15-B4, 18-B5 RESET_7404
R4114 1/16W SS 10K
1-C3, 16-A2, 22-B6 7404_UART_RXD1
16-C1 EXT_DBG_INT
18-D5
13-D4, 15-A5, 18-B2 7404_EBI_RW
18-D5 7404_EBI_RD
13-B5, 13-C4, 15-A5
15-C4, 18-B2
7404_EBI_CS[0:5]
CS_ETHER
from/to 7404 FLASH JIGU


IDEO Ass'y
M4
CN4101
AKM1399- -TBB
MODE_A
GND
B0_EVN
B1_EVN
B2_EVN
B3_EVN
B4_EVN
B5_EVN
B6_EVN
B7_EVN
B8_EVN
B9_EVN
G0_EVN
G1_EVN
G2_EVN
G3_EVN
G4_EVN
G5_EVN
G6_EVN
G7_EVN
G8_EVN
G9_EVN
R0_EVN
R1_EVN
IN
R2_EVN
R3_EVN
R4_EVN
R5_EVN
R6_EVN
R7_EVN
R8_EVN
R9_EVN
CLK
DE
HD
VD
THEATER
TXD_MD
RXD_MD
REQ_MD
RELAY2
ARIA_OE
NC
V+3_4V_ACT2
TP4104
TP4105
TP4119
R4111
SS
0
TP4120
TP4121
TP4101
TP4102
TP4103
TP4106
TP4107
TP4108
TP4109
φ1.0 Aside
BA_O[0:9]
GA_O[0:9]
RA_O[0:9]
CLK_O
DE_O
HD_O
VD_O
THEATER
TXD_MD
RXD_MD
RELAY2
20-A1
20-B1
1-C1, 22-C5, 23-A6
1-C1, 22-C5, 23-D5
3-B5, 23-D6
NO USE
C4103
ST
SS
CH
100P/50
GND
EMMA2[0:163]
1-C6, 1-C6, 1-D1
3-B5, 6-D1, 7-D3
9-A2, 9-C6, 10-A6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
114
48
MODE
REQ_MD
D4101
1SS301-TLB
ARIA_OE
19-D2
TP4115
Ass'y
I2C_CI_SDA
I2C_CI_SCL
CI_IRQ_N
CI_RW_N
CI_RD_N
CI_ACK_N
CI_CS_N
CI_RST
CI_MCLK
TSO_DATA0
TSO_DATA1
TSO_DATA2
TSO_DATA3
TSO_DATA4
TSO_DATA5
TSO_DATA6
TSO_DATA7
TSO_VALID
TSO_SYNC
TSO_CLK
TSI_DATA0
TSI_DATA1
TSI_DATA2
TSI_DATA3
TSI_DATA4
TSI_DATA5
TSI_DATA6
TSI_DATA7
TSI_VALID
TSI_SYNC
TSI_CLK
FE_TS_SEL
EMG_DDC
DD_RST
FE2_RST
FE2_INT
I2C2_SDA
I2C2_SCL
M17
CN4106
AKM1399- -TBB
EUH
F4101
VTF1091- -T
for AUS
R4119
AUS, AUS_D
0.0
1/32W
R4116
R4117
R4120
R4118
for EUH
F4104
F4103
R4112
R4105
R4115
R4113
R4104
100
22
16-D2
16-A2
16-C1
5-A3
5-A3, 23-C1
13-C3
13-B3
16-B2
13-D5
13-C5
13-D4
13-B1, 16-B2
7404_I2C2_SCL
7404_I2C2_SDA
FE2_INT
FE2_RST
DD_RST
EMG_DDC
CI_TS_SEL
TSO_FE1_BUF[0:10]
TSO_CI[0:10]
CI_MCLK
CI_RST
CI_CS_N
CI_ACK_N
CI_RD_N
CI_RW_N
CI_IRQ_N
7404_I2C3_SCL
7404_I2C3_SDA
CARD_DET1
USB
M6
AKM1276- -TBB
CN4107
1 VBUS
2 D-
3 D+
4 GND
5 SHIELD
TP4110
TP4111
TP4112
TP4113
TP4114
V+5_1V_D_USB
L4101
BTX1042- -T
L4102
NO USE
L4103
ATH1160- -T
ST
P4101
ZZ-4322-A-T
P4102
15-C2
USB_D_NEG
USB_D_POS
from 7404_0

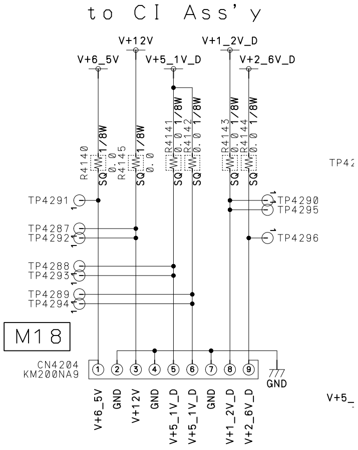
MAIN ASS'Y (EU_HD, AUS) (02/24)
BOARD_IF_1 BLOCK

AWV2556-
AWV2557-
AWV2588-

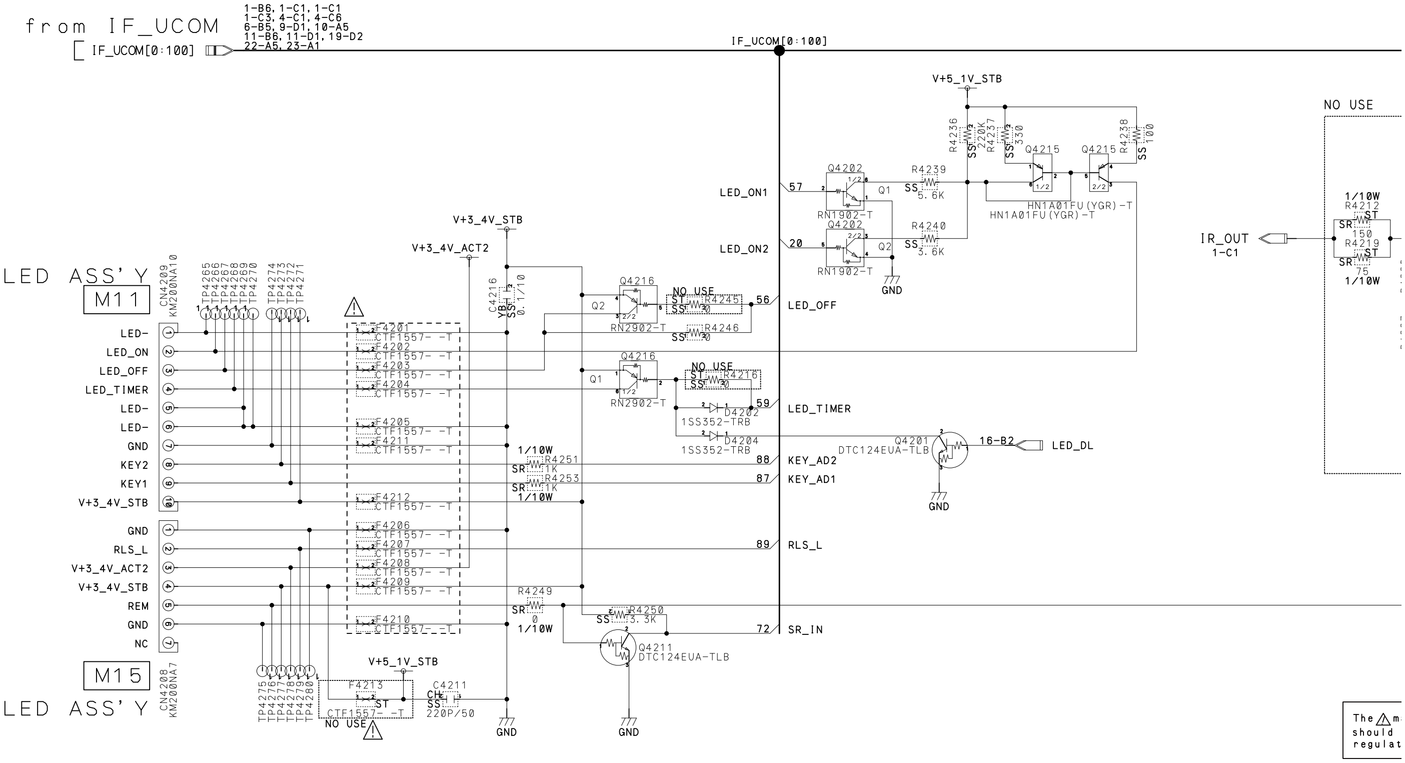
7.3 MAIN ASSY (3/24) [BOARD_IF_2 BLOCK]

The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	4202-4207, 4211, 4213-4217	4202-4206, 4213, 4215, 4217	4202-4206, 4213, 4215, 4217	4202-4206, 4213, 4215, 4217
CN	4201, 4202, 4204, 4207-4210	4201	4201	4201
D	4202-4204	4203	4203	4203
F	4201-4213	4213	4213	4213
L	4202			
Q	4201, 4202, 4205-4207, 4209-4217	4209, 4210, 4212-4214	4209, 4210, 4212-4214	4209, 4210, 4212-4214
R	4202-4229, 4231-4233, 4236-4243, 4245, 4246, 4249-4251, 4256	4202-4207, 4209-4220, 4225, 4227, 4228, 4231, 4241-4243, 4245, 4256	4202-4207, 4209-4220, 4225, 4227, 4228, 4231, 4241-4243, 4245, 4256	4202-4207, 4209-4220, 4225, 4227, 4228, 4231, 4241-4243, 4245, 4256

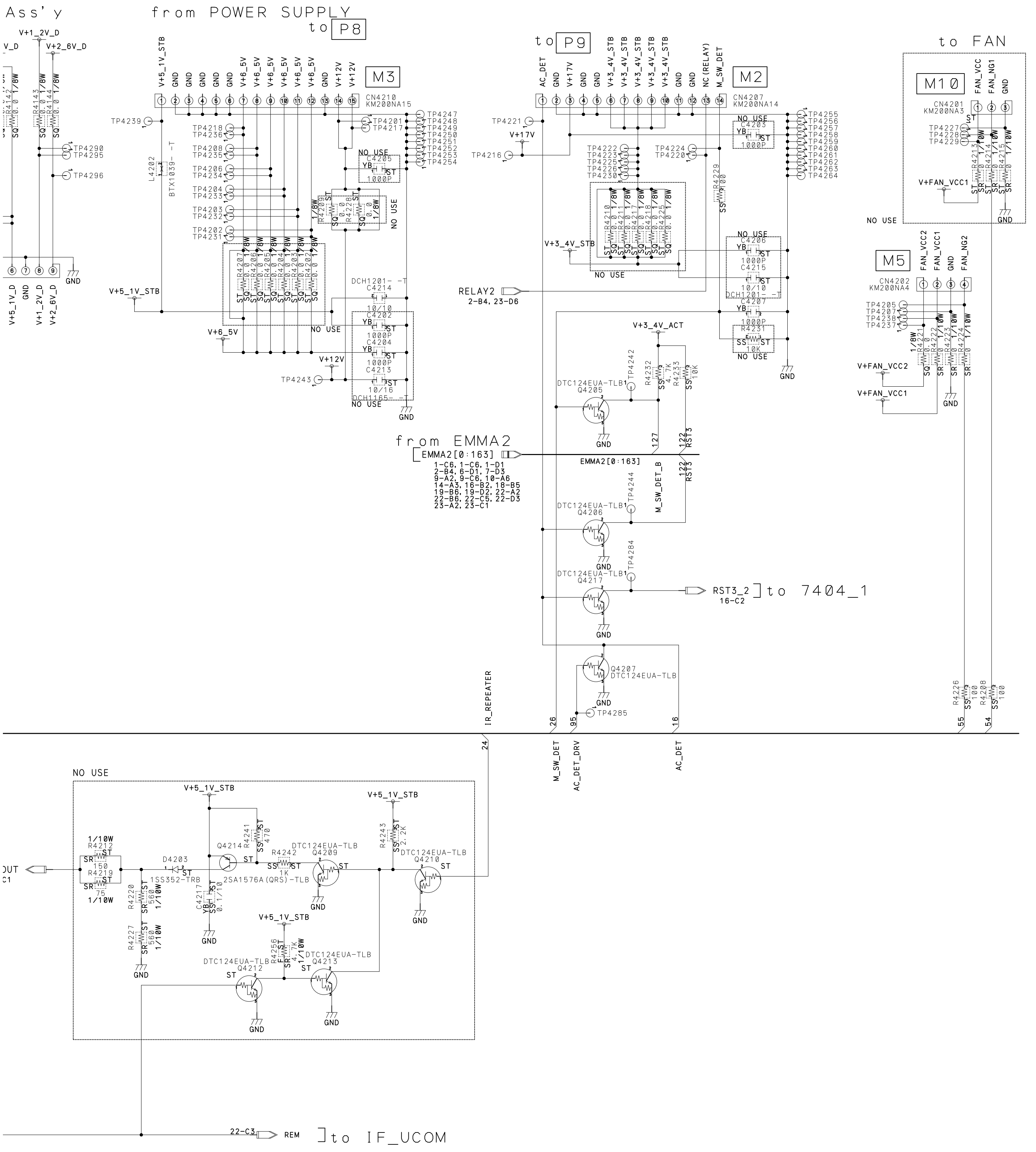


to CI Ass'y
V+6_5V
V+12V
V+5_1V_D
V+1_2V_D
V+2_6V_D
R4140 SQ 1/8W 0.0
R4145 SQ 1/8W 0.0
R4141 SQ 0.0 1/8W
R4142 SQ 0.0 1/8W
R4143 SQ 0.0 1/8W
R4144 SQ 0.0 1/8W
TP4291
TP4287
TP4292
TP4288
TP4293
TP4289
TP4294
TP4290
TP4295
TP4296
TP42
M18
CN4204
KM200NA9
V+6_5V
GND
V+12V
GND
V+5_1V_D
V+5_1V_D
GND
V+1_2V_D
V+2_6V_D
GND
V+5_



from IF_UCOM
IF_UCOM[0:100]
1-B6, 1-C1, 1-C1
1-C3, 4-C1, 4-C6
6-B5, 9-D1, 10-A5
11-B6, 11-D1, 19-D2
22-A5, 23-A1
IF_UCOM[0:100]
V+5_1V_STB
R4236 SS 220K
R4237 SS 330
R4238 SS 100
Q4215
Q4215
HN1A01FU(YGR)-T
HN1A01FU(YGR)-T
Q4202
RN1902-T
Q4202
RN1902-T
Q1
Q2
R4239 SS 5.6K
R4240 SS 3.6K
LED_ON1
57
LED_ON2
20
GND
NO USE
1/10W
R4212 SR ST 150
R4219 SR ST 75
1/10W
IR_OUT
1-C1
V+3_4V_STB
V+3_4V_ACT2
C4216 YB SS 0.1/10
Q4216
Q2
RN2902-T
NO USE
ST SS R4245 0
R4246 SS 0
56
LED_OFF
Q4216
Q1
RN2902-T
NO USE
ST SS R4216 0
59
LED_TIMER
D4202 1SS352-TRB
D4204 1SS352-TRB
Q4201
DTC124EUA-TLB
16-B2
LED_DL
GND
LED ASS'Y
M11
CN4209
KM200NA10
TP4265
TP4266
TP4267
TP4268
TP4269
TP4270
TP4274
TP4273
TP4272
TP4271
LED-
LED_ON
LED_OFF
LED_TIMER
LED-
LED-
GND
KEY2
KEY1
V+3_4V_STB
F4201 CTF1557- -T
F4202 CTF1557- -T
F4203 CTF1557- -T
F4204 CTF1557- -T
F4205 CTF1557- -T
F4211 CTF1557- -T
F4212 CTF1557- -T
F4206 CTF1557- -T
F4207 CTF1557- -T
F4208 CTF1557- -T
F4209 CTF1557- -T
F4210 CTF1557- -T
1/10W
R4251 SR 1K
R4253 SR 1K
1/10W
88
KEY_AD2
87
KEY_AD1
89
RLS_L
GND
RLS_L
V+3_4V_ACT2
V+3_4V_STB
REM
GND
NC
R4249 SR 0 1/10W
R4250 SS 3.3K
72
SR_IN
Q4211
DTC124EUA-TLB
M15
LED ASS'Y
CN4208
KM200NA7
TP4275
TP4276
TP4277
TP4278
TP4279
TP4280
V+5_1V_STB
F4213 ST CTF1557- -T
NO USE
C4211 CH SS 220P/50
GND
GND

The ⚠ m
should
regulat

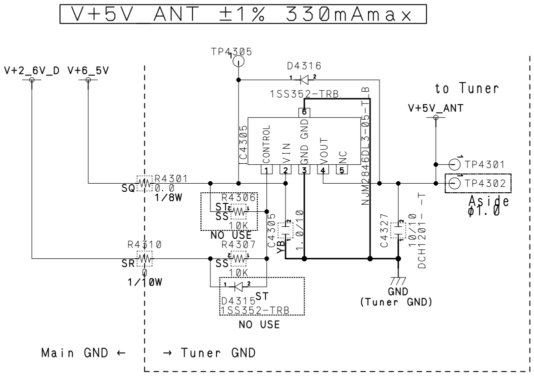

Ass'y
from POWER SUPPLY
to P8
M3
CN4210
KM200NA15
V+5_1V_STB
GND
V+6_5V
V+12V
to P9
M2
CN4207
KM200NA14
AC_DET
V+17V
V+3_4V_STB
NC(RELAY)
M_SW_DET
to FAN
M10
CN4201
KM200NA3
FAN_VCC
FAN_NG1
M5
CN4202
KM200NA4
FAN_VCC2
FAN_VCC1
FAN_NG2
V+FAN_VCC1
V+FAN_VCC2
V+1_2V_D
V+2_6V_D
V+5_1V_D
L4202
BTX1039- -T
DCH1201- -T
DCH1165- -T
NO USE
RELAY2
2-B4, 23-D6
V+3_4V_ACT
from EMMA2
EMMA2[0:163]
1-C6, 1-C6, 1-D1
2-B4, 6-D1, 7-D3
9-A2, 9-C6, 10-A6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
DTC124EUA-TLB
Q4205
Q4206
Q4217
Q4207
RST3
M_SW_DET_B
RST3_2
16-C2
to 7404_1
IR_REPEATER
M_SW_DET
AC_DET_DRV
AC_DET
TP4285
D4203
1SS352-TRB
Q4214
2SA1576A(QRS)-TLB
Q4209
Q4210
Q4212
Q4213
R4212
R4219
R4220
R4227
R4241
R4242
R4243
R4256
C4217
REM
22-C3
to IF_UCOM

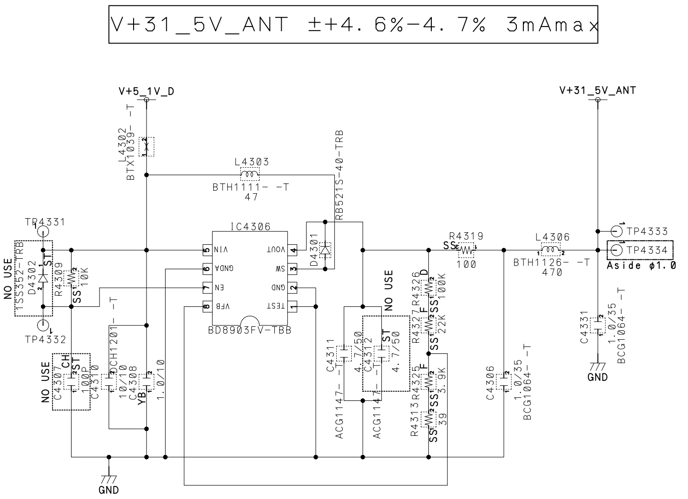
MAIN ASS'Y (EU_HD, AUS) (03/24)
BOARD_IF_2 BLOCK

AWV2556-
AWV2557-
AWV2588-

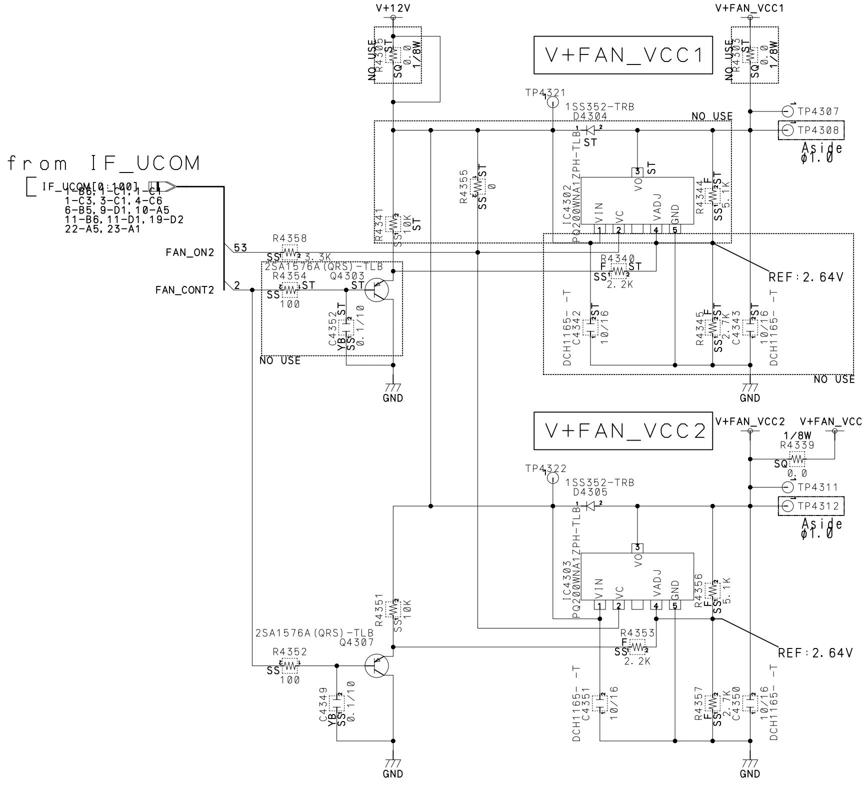
The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.

7.4 MAIN ASSY (4/24) [POWER_0 BLOCK]


V+5V_ANT ±1% 330mAmax
V+2_6V_D
V+6_5V
TP4305
D4316
1SS352-TRB
to Tuner
V+5V_ANT
IC4305
CONTROL
VIN
GND GND
VOUT
NC
NJM2846DL3-05-T_B
TP4301
TP4302
Aside
ϕ1.0
R4301
SQ
0.0
1/8W
R4306
ST
SS
10K
NO USE
R4310
SR
0
1/10W
R4307
SS
10K
C4305
YB
1.0/10
C4327
10/10
DCH1201- -T
D4315
ST
1SS352-TRB
NO USE
GND
(Tuner GND)
Main GND ←
→ Tuner GND

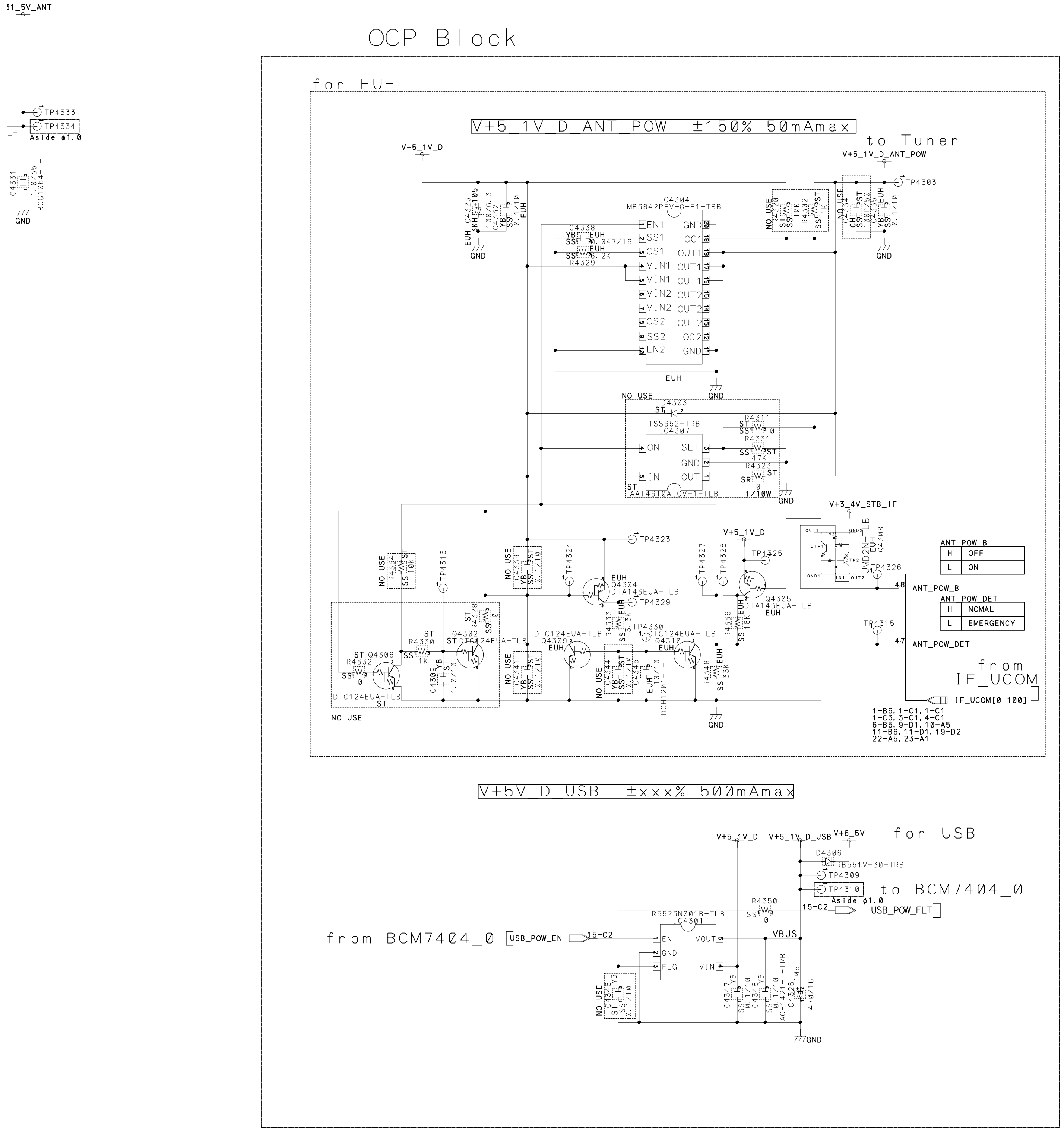

V+31_5V_ANT ±+4.6%-4.7% 3mAmax
V+5_1V_D
L4302
BTX1039- -T
L4303
BTH1111- -T
47
RB521S-40-TRB
D4301
IC4306
VIN
GNDA
EN
VFB
VOUT
SW
GND
TEST
BD8903FV-TBB
TP4331
TP4332
NO USE
1SS352-TRB
D4302
ST
R4309
SS
10K
NO USE
C4307
CH
ST
100P
C4310
DCH1201- -T
10/10
C4308
YB
1.0/10
C4311
ACG1147- -T
4.7/50
C4312
ACG1147- -T
ST
4.7/50
NO USE
R4326
D
SS
100K
R4327
F
SS
22K
R4325
F
SS
3.9K
R4313
SS
39
R4319
SS
100
L4306
BTH1126- -T
470
C4306
1.0/35
BCG1064- -T
V+31_5V_ANT
TP4333
TP4334
Aside ϕ1.0
C4331
1.0/35
BCG1064- -T
GND

The
sho
reg


from IF_UCOM
IF_UCOM[0:100]
1-B6, 1-C1, 1-C1
1-C3, 3-C1, 4-C6
6-B5, 9-D1, 10-A5
11-B6, 11-D1, 19-D2
22-A5, 23-A1
FAN_ON2
53
FAN_CONT2
2
V+12V
NO USE
R4305
ST
SQ
0.0
1/8W
V+FAN_VCC1
V+FAN_VCC1
NO USE
R4303
ST
SQ
0.0
1/8W
TP4321
1SS352-TRB
D4304
ST
NO USE
TP4307
TP4308
Aside
ϕ1.0
R4355
SS
ST
0
IC4302
PQ200WNA1ZPH-TLB
VIN
VC
VO
VADJ
GND
ST
R4344
F
SS
ST
5.1K
R4341
SS
10K
ST
R4358
SS
3.3K
2SA1576A(QRS)-TLB
R4354
SS
ST
100
Q4303
ST
C4352
YB
SS
ST
0.1/10
NO USE
R4340
F
SS
ST
2.2K
REF:2.64V
DCH1165- -T
C4342
ST
10/16
R4345
F
SS
ST
2.7K
C4343
ST
10/16
DCH1165- -T
NO USE
GND
V+FAN_VCC2
V+FAN_VCC2
V+FAN_VCC1
1/8W
R4339
SQ
0.0
TP4311
TP4312
Aside
ϕ1.0
TP4322
1SS352-TRB
D4305
IC4303
PQ200WNA1ZPH-TLB
VIN
VC
VO
VADJ
GND
R4356
F
SS
5.1K
R4351
SS
10K
2SA1576A(QRS)-TLB
Q4307
R4352
SS
100
C4349
YB
SS
0.1/10
R4353
F
SS
2.2K
REF:2.64V
DCH1165- -T
C4351
10/16
R4357
F
SS
2.7K
C4350
10/16
DCH1165- -T
GND

ITEM	USED		VACANT
		EUH AW2556–	AUS AW2557–
C	4305–4312, 4323, 4326, 4327, 4331, 4332, 4334, 4335, 4338, 4339, 4341–4352	4307, 4309, 4312, 4334, 4339, 4341–4344, 4346, 4352	4307, 4309, 4312, 4334, 4339, 4341–4344, 4346, 4352
D	4301–4306, 4315, 4316	4302–4304, 4315	4302–4304, 4315
IC	4301–4307	4302, 4307	4302, 4307
L	4302, 4303, 4306		
Q	4302–4310	4302, 4306	4302, 4306
R	4301–4303, 4305–4307, 4309–4311, 4313, 4319, 4320, 4323, 4325–4334, 4336, 4339–4341, 4344, 4345, 4348, 4350–4358	4302, 4303, 4305, 4306, 4311, 4320, 4323, 4330–4332, 4334, 4340, 4341, 4344, 4345, 4354, 4355	4302, 4303, 4305, 4306, 4311, 4320, 4323, 4330–4332, 4334, 4340, 4341, 4344, 4345, 4354, 4355

The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.

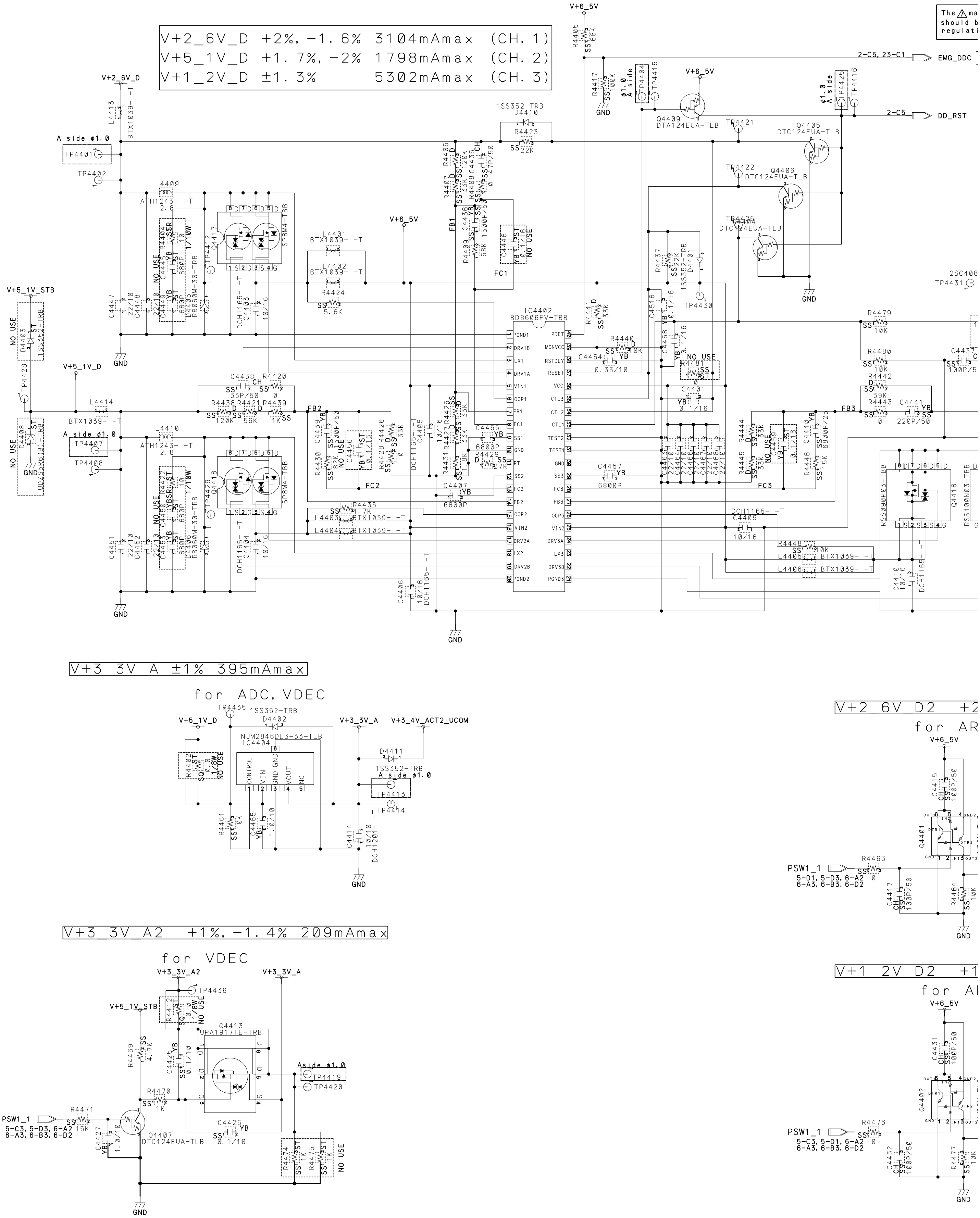

31_5V_ANT
TP4333
TP4334
Aside φ1.0
C4331
1.0/35
BCG1064- -T
GND
OCP Block
for EUH
V+5_1V_D_ANT_POW ±150% 50mAmax
to Tuner
V+5_1V_D
V+5_1V_D_ANT_POW
TP4303
IC4304
MB3842PFV-G-E1-TBB
EN1
SS1
CS1
VIN1
VIN2
CS2
SS2
EN2
GND
OC1
OUT1
OUT2
OC2
C4323
C4332
100/6.3
0.1/10
C4338
0.047/16
R4329
6.2K
R4320
R4302
10K
1K
C4334
C4335
NO USE
EUH
GND
D4303
1SS352-TRB
IC4307
AAT4610AIGV-1-TLB
ON
SET
IN
OUT
R4311
R4331
47K
R4323
1/10W
V+3_4V_STB_IF
UMD2N-TLB
Q4308
ANT_POW_B
H OFF
L ON
ANT_POW_DET
H NOMAL
L EMERGENCY
TP4323
TP4324
TP4316
TP4327
TP4328
TP4325
TP4326
TP4329
TP4330
TP4315
V+5_1V_D
Q4304
DTA143EUA-TLB
Q4305
DTA143EUA-TLB
Q4302
DTC124EUA-TLB
Q4309
DTC124EUA-TLB
Q4310
DTC124EUA-TLB
Q4306
DTC124EUA-TLB
R4334
10K
R4328
R4330
1K
R4332
R4333
3.3K
R4336
18K
R4348
33K
C4339
C4309
1.0/10
C4341
C4344
C4345
C4310
10/10
DCH1201- -T
48
47
from IF_UCOM
IF_UCOM[0:100]
1-B6, 1-C1, 1-C1
1-C3, 3-C1, 4-C1
6-B5, 9-D1, 10-A5
11-B6, 11-D1, 19-D2
22-A5, 23-A1
V+5V D USB ±xxx% 500mAmax
for USB
V+5_1V_D
V+5_1V_D_USB
V+6_5V
D4306
RB551V-30-TRB
TP4309
TP4310
Aside φ1.0
to BCM7404_0
R4350
15-C2
USB_POW_FLT
R5523N001B-TLB
IC4301
from BCM7404_0
USB_POW_EN
EN
GND
FLG
VOUT
VIN
VBUS
C4346
C4347
C4348
C4326
ACH1421- -TRB
470/16
GND

	VACANT	
EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
7, 4309, 4312, 4334, 9, 4341-4344, 4346, 2	4307, 4309, 4312, 4334, 4339, 4341-4344, 4346, 4352	4307, 4309, 4312, 4334, 4339, 4341-4344, 4346, 4352
2-4304, 4315	4302-4304, 4315	4302-4304, 4315
2, 4307	4302, 4307	4302, 4307
2, 4306	4302, 4306	4302, 4306
2, 4303, 4305, 4306, 1, 4320, 4323, 0-4332, 4334, 4340, 1, 4344, 4345, 4354, 5	4302, 4303, 4305, 4306, 4311, 4320, 4323, 4330-4332, 4334, 4340, 4341, 4344, 4345, 4354, 4355	4302, 4303, 4305, 4306, 4311, 4320, 4323, 4330-4332, 4334, 4340, 4341, 4344, 4345, 4354, 4355

MAIN ASS'Y (EU_HD, AUS) (04/24)
POWER_0 BLOCK

AWV2556-
AWV2557-
AWV2588-

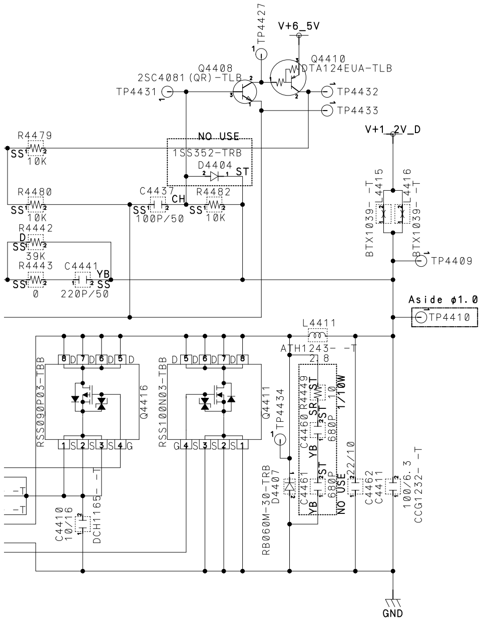
7.5 MAIN ASSY (5/24) [POWER_1 BLOCK]


V+2_6V_D +2%, -1.6% 3104mAmax (CH.1)
V+5_1V_D +1.7%, -2% 1798mAmax (CH.2)
V+1_2V_D ±1.3% 5302mAmax (CH.3)
V+6_5V
V+2_6V_D
V+5_1V_STB
V+5_1V_D
IC4402
BD8606FV-TBB
PGND1
DRV1B
LX1
DRV1A
VIN1
OCP1
FB1
FC1
SS1
GND
RT
SS2
FC2
FB2
OCP2
VIN2
DRV2A
LX2
DRV2B
PGND2
PDET
MONVCC
RSTDLY
RESET
VCC
CTL3
CTL2
CTL1
TEST2
TEST1
GND
SS3
FC3
FB3
OCP3
VIN3
DRV3A
LX3
DRV3B
PGND3
EMG_DDC
DD_RST
2-C5, 23-C1
2-C5
Q4409
DTA124EUA-TLB
Q4405
DTC124EUA-TLB
Q4406
DTC124EUA-TLB
Q4404
DTC124EUA-TLB
1SS352-TRB
D4410
R4423
22K
Q4417
SP8M4-TBB
Q4418
SP8M4-TBB
L4409
ATH1243- -T
L4410
ATH1243- -T
L4401
BTX1039- -T
L4402
BTX1039- -T
L4413
BTX1039- -T
L4414
BTX1039- -T
Q4416
RSS090P03-TBB
RSS100N03-TBB
A side φ1.0
TP4401
TP4402
TP4407
TP4408
NO USE
D4403
1SS352-TRB
D4408
UDZS5R6(B)-TRB
GND
V+3_3V_A ±1% 395mAmax
for ADC, VDEC
V+3_3V_A
V+3_4V_ACT2_UCOM
TP4435
1SS352-TRB
D4402
NJM2846DL3-33-TLB
IC4404
CONTROL
VIN
GND
VOUT
NC
D4411
TP4413
TP4414
DCH1201- -T
V+3_3V_A2 +1%, -1.4% 209mAmax
for VDEC
V+3_3V_A2
TP4436
Q4413
UPA1917TE-TRB
Aside φ1.0
TP4419
TP4420
Q4407
DTC124EUA-TLB
PSW1_1
5-C3, 5-D3, 6-A2
6-A3, 6-B3, 6-D2
V+2 6V D2 +2
for AR
Q4401
R4463
PSW1_1
5-D1, 5-D3, 6-A2
6-A3, 6-B3, 6-D2
V+1 2V D2 +1
for AI
Q4402
R4476
PSW1_1
5-C3, 5-D1, 6-A2
6-A3, 6-B3, 6-D2
2SC408
TP4431
The ma
should b
regulati

The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.

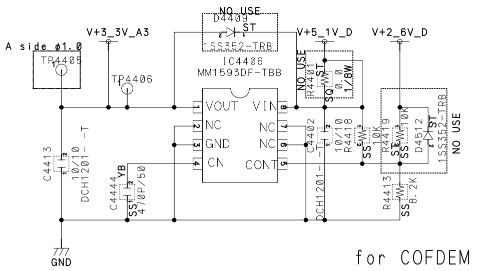
2-C5, 23-C1 EMG_DDC] to EMMA2 BLOCK

2-C5 DD_RST



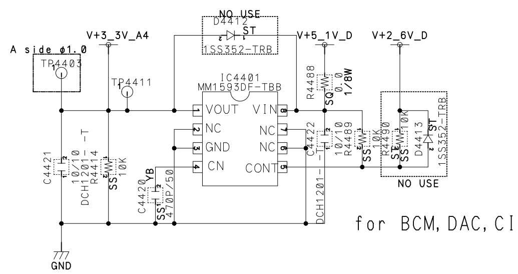
V+6_5V
TP4427
Q4408
2SC4081(QR)-TLB
Q4410
DTA124EUA-TLB
TP4431
TP4432
TP4433
V+1_2V_D
R4479 10K
NO USE
1SS352-TRB
D4404
ST
R4480 10K
C4437 CH 100P/50
R4482 10K
R4442 39K
R4443 0
C4441 YB 220P/50
L4415
L4416
BTX1039- -T
TP4409
Aside φ1.0
TP4410
L4411
ATH1243- -T
Q4416
RSS090P03-TBB
RSS100N03-TBB
Q4411
TP4434
R4449
C4460
C4461
D4407
RB060M-30-TRB
C4410 10/16
DCH1165- -T
C4462
C4411
100/6.3
CCG1232- -T
NO USE
GND

V+3 3V A3 ±2% 130mAmax



NO USE
D4409
ST
1SS352-TRB
V+3_3V_A3
V+5_1V_D
V+2_6V_D
A side φ1.0
TP4405
TP4406
IC4406
MM1593DF-TBB
VOUT
VIN
NC
GND
CN
CONT
NO USE
R4417
0.0
1/8W
C4413 10/10
DCH1201- -T
C4444 YB 470P/50
C4402 10/10
DCH1201- -T
R4418 10K
R4419 10K
D4512
1SS352-TRB
NO USE
R4413 8.2K
GND
for COFDEM

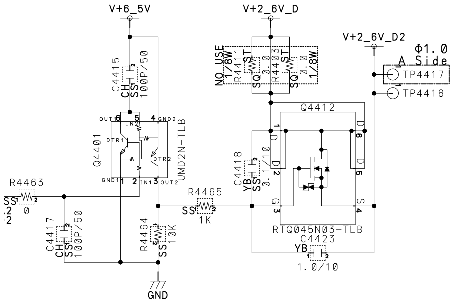
V+3 3V A4 ±2% XXXmAmax



NO USE
D4412
ST
1SS352-TRB
V+3_3V_A4
V+5_1V_D
V+2_6V_D
A side φ1.0
TP4403
TP4411
IC4401
MM1593DF-TBB
VOUT
VIN
NC
GND
CN
CONT
R4488
0.0
1/8W
C4421 10/10
DCH1201- -T
R4414 10K
C4420 YB 470P/50
C4422 10/10
DCH1201- -T
R4489 10K
R4490 10K
D4413
1SS352-TRB
NO USE
GND
for BCM, DAC, CI

2 6V D2 +2%, -3.5% 834mAmax

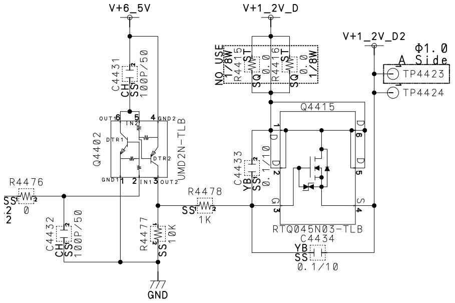
for ARIA, ARIA_DDR



V+6_5V
V+2_6V_D
V+2_6V_D2
φ1.0
A Side
TP4417
TP4418
C4415 CH 100P/50
NO USE
1/8W
R4411
R4403
0.0
1/8W
Q4412
Q4401
UMD2N-TLB
C4418 YB 0.1/10
R4463 0
R4465 1K
R4464 10K
C4417 CH 100P/50
RTQ045N03-TLB
C4423 YB 1.0/10
GND

1 2V D2 +1.3%, -5.6% 1292mAmax

for ARIA



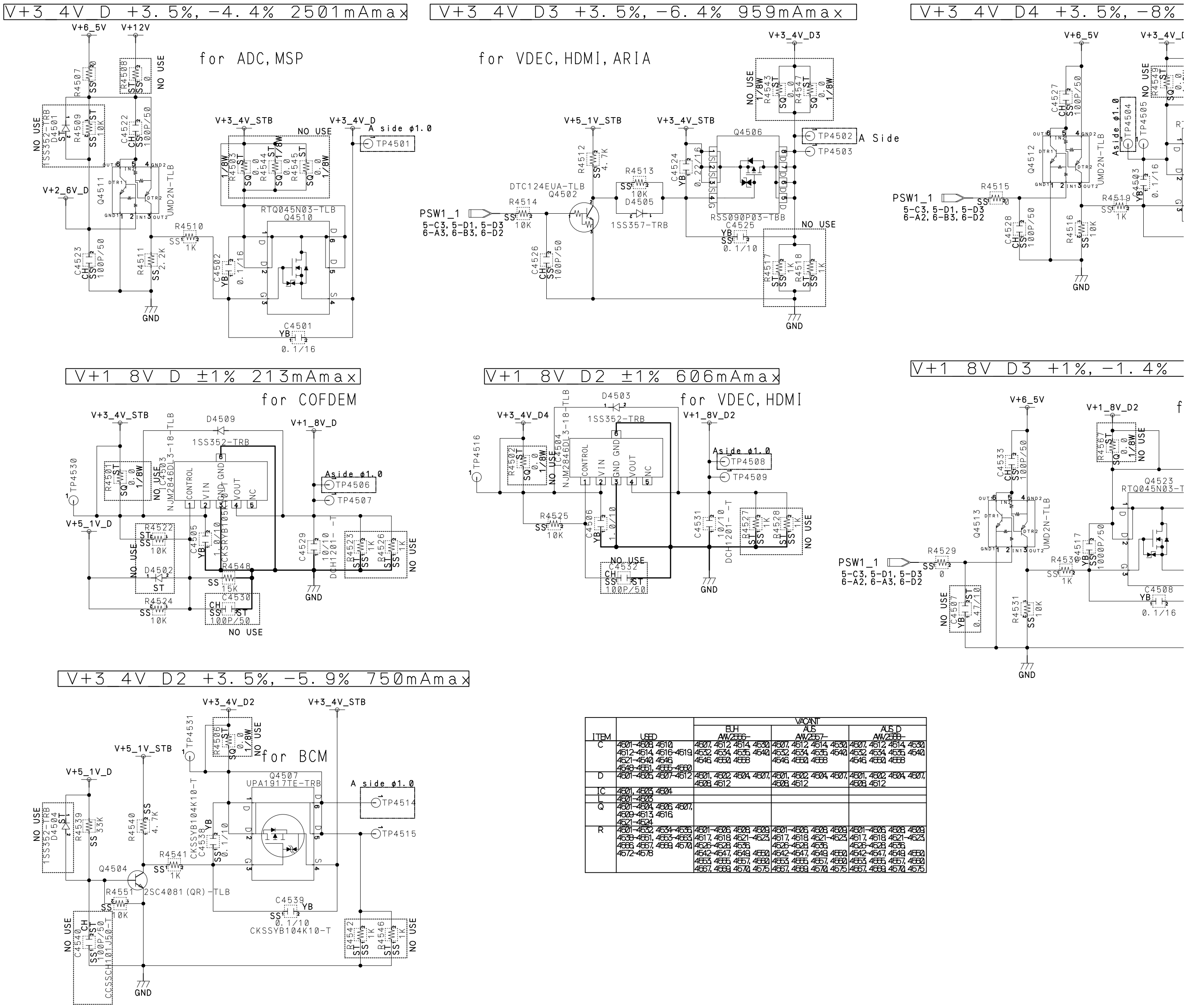
V+6_5V
V+1_2V_D
V+1_2V_D2
φ1.0
A Side
TP4423
TP4424
C4431 CH 100P/50
NO USE
1/8W
R4415
R4416
0.0
1/8W
Q4415
Q4402
UMD2N-TLB
C4433 YB 0.1/10
R4476 0
R4478 1K
R4477 10K
C4432 CH 100P/50
RTQ045N03-TLB
C4434 YB 0.1/10
GND

ITEM	USED	VACANT EUH AWV2556-	 AUS AWV2557-	 AUS_D AWV2588-
C	4401-4407, 4409-4411, 4413-4415, 4417, 4418, 4420-4423, 4425-4427, 4431-4441, 4444-4468	4445, 4446, 4449, 4450, 4453, 4456, 4459-4461	4445, 4446, 4449, 4450, 4453, 4456, 4459-4461	4445, 4446, 4449, 4450, 4453, 4456, 4459-4461
D	4401-4413	4403, 4404, 4408, 4409, 4412, 4413	4403, 4404, 4408, 4409, 4412, 4413	4403, 4404, 4408, 4409, 4412, 4413
IC	4401, 4402, 4404, 4406			
L	4401-4406, 4409-4411, 4413-4416			
Q	4401, 4402, 4404-4413, 4415-4418			
R	4401-4409, 4411-4431, 4436-4446, 4448, 4449, 4461, 4463-4465, 4469-4471, 4474-4482, 4488-4490	4401-4404, 4411, 4412, 4415, 4416, 4419, 4422, 4449, 4474, 4475, 4481, 4490	4401-4404, 4411, 4412, 4415, 4416, 4419, 4422, 4449, 4474, 4475, 4481, 4490	4401-4404, 4411, 4412, 4415, 4416, 4419, 4422, 4449, 4474, 4475, 4481, 4490

MAIN ASS'Y (EU_HD, AUS) (05/24)
POWER_1 BLOCK

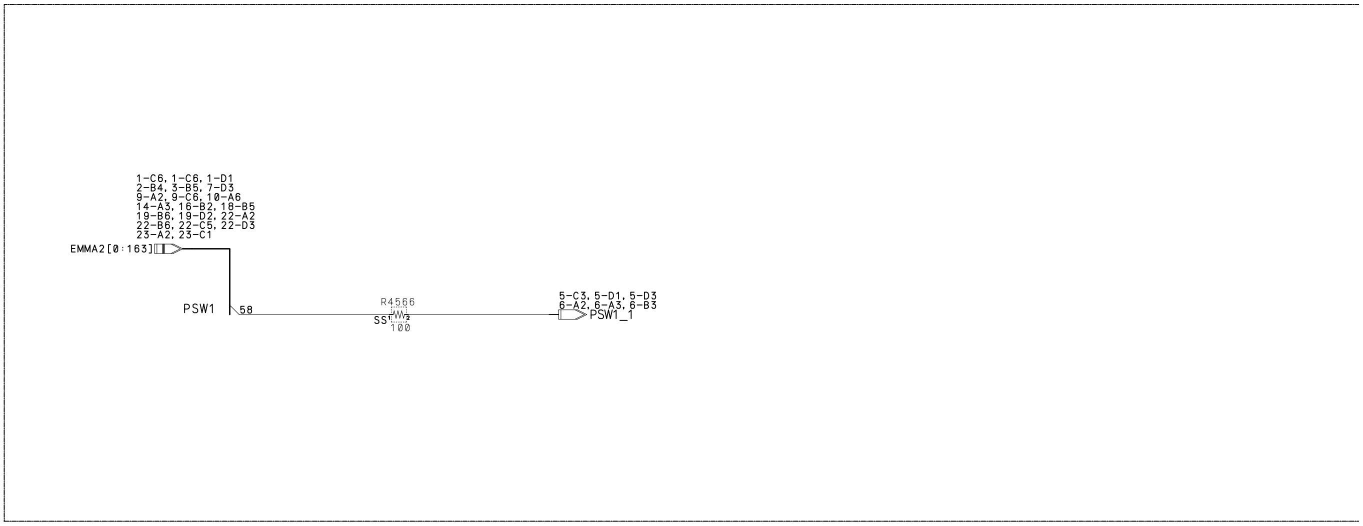
AWV2556-
AWV2557-
AWV2588-

7.6 MAIN ASSY (6/24) [POWER_2 BLOCK]

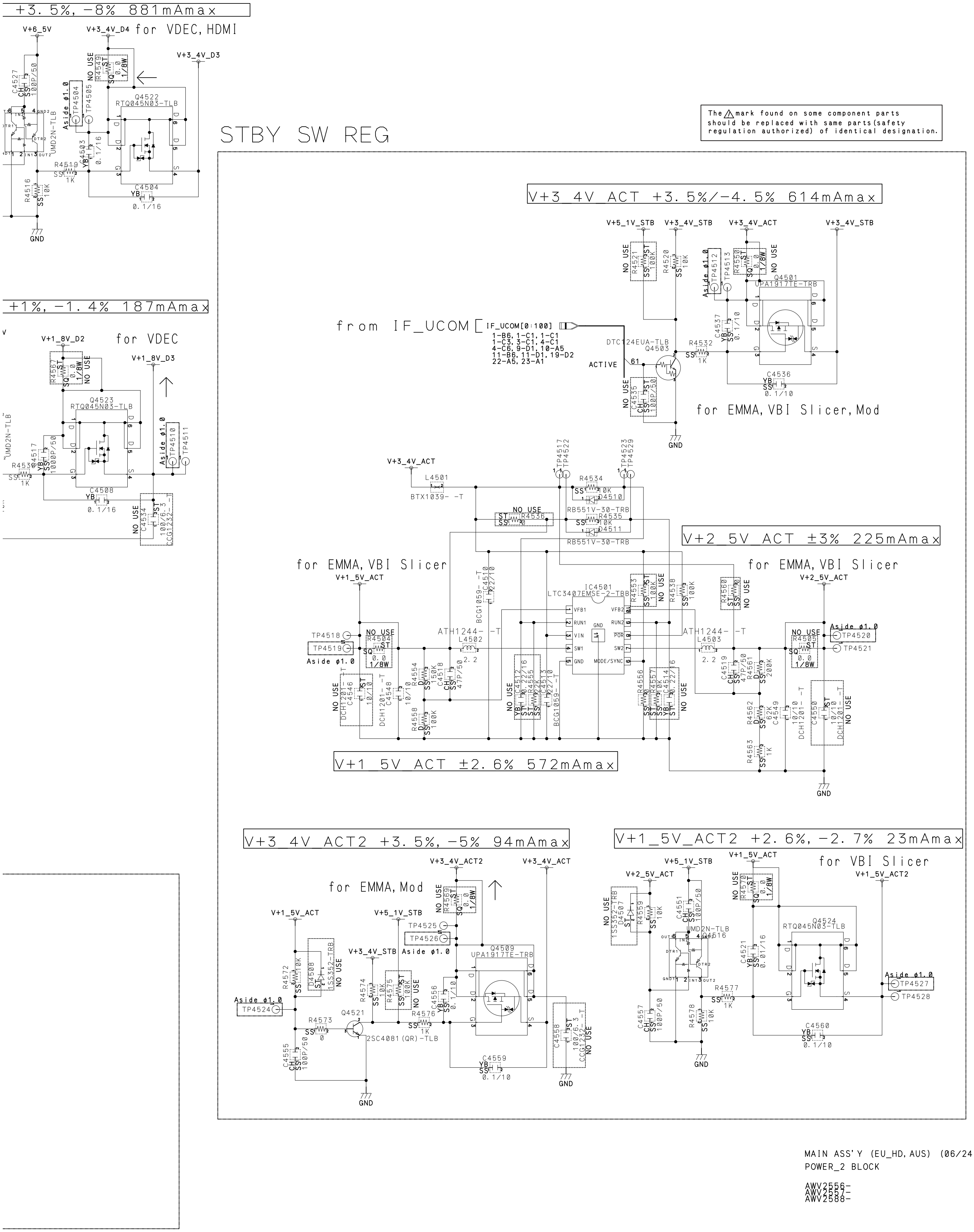

A
B
C
D
V+3_4V_D +3.5%, -4.4% 2501mAmax
for ADC, MSP
V+6_5V
V+12V
NO USE
V+2_6V_D
V+3_4V_STB
V+3_4V_D
A side φ1.0
TP4501
Q4511
UMD2N-TLB
RTQ045N03-TLB
Q4510
GND
V+3_4V_D3 +3.5%, -6.4% 959mAmax
for VDEC, HDMI, ARIA
V+3_4V_D3
V+5_1V_STB
Q4506
RSS090P03-TBB
TP4502
A Side
TP4503
DTC124EUA-TLB
Q4502
D4505
1SS357-TRB
PSW1_1
5-C3, 5-D1, 5-D3
6-A3, 6-B3, 6-D2
V+3_4V_D4 +3.5%, -8%
Q4512
TP4504
TP4505
Aside φ1.0
5-C3, 5-D1, 5-D3
6-A2, 6-B3, 6-D2
V+1_8V_D ±1% 213mAmax
for COFDEM
D4509
1SS352-TRB
IC4503
NJM2846DL3-18-TLB
V+1_8V_D
TP4530
TP4506
TP4507
V+5_1V_D
D4502
V+1_8V_D2 ±1% 606mAmax
for VDEC, HDMI
D4503
1SS352-TRB
IC4504
NJM2846DL3-18-TLB
V+3_4V_D4
V+1_8V_D2
TP4516
TP4508
TP4509
CONTROL
VIN
GND
VOUT
NC
V+1_8V_D3 +1%, -1.4%
V+6_5V
V+1_8V_D2
Q4513
UMD2N-TLB
Q4523
RTQ045N03-T
PSW1_1
5-C3, 5-D1, 5-D3
6-A2, 6-A3, 6-D2
V+3_4V_D2 +3.5%, -5.9% 750mAmax
for BCM
V+3_4V_D2
V+3_4V_STB
V+5_1V_STB
V+5_1V_D
TP4531
Q4507
UPA1917TE-TRB
A side φ1.0
TP4514
TP4515
D4504
1SS352-TRB
Q4504
2SC4081(QR)-TLB
CKSSYB104K10-T
GND

ITEM	USED	VACANT		
		EUH AWV2556–	AUS AWV2557–	AUS_D AWV2588–
C	4501–4508, 4510, 4512–4514, 4516–4519, 4521–4540, 4546, 4548–4551, 4555–4560	4507, 4512, 4514, 4530, 4532, 4534, 4535, 4540, 4546, 4550, 4558	4507, 4512, 4514, 4530, 4532, 4534, 4535, 4540, 4546, 4550, 4558	4507, 4512, 4514, 4530, 4532, 4534, 4535, 4540, 4546, 4550, 4558
D	4501–4505, 4507–4512	4501, 4502, 4504, 4507, 4508, 4512	4501, 4502, 4504, 4507, 4508, 4512	4501, 4502, 4504, 4507, 4508, 4512
IC	4501, 4503, 4504			
L	4501–4503			
Q	4501–4504, 4506, 4507, 4509–4513, 4516, 4521–4524			
R	4501–4532, 4534–4536, 4538–4551, 4553–4563, 4566, 4567, 4569, 4570, 4572–4578	4501–4506, 4508, 4509, 4517, 4518, 4521–4523, 4526–4528, 4536, 4542–4547, 4549, 4550, 4553, 4555, 4557, 4560, 4567, 4569, 4570, 4575	4501–4506, 4508, 4509, 4517, 4518, 4521–4523, 4526–4528, 4536, 4542–4547, 4549, 4550, 4553, 4555, 4557, 4560, 4567, 4569, 4570, 4575	4501–4506, 4508, 4509, 4517, 4518, 4521–4523, 4526–4528, 4536, 4542–4547, 4549, 4550, 4553, 4555, 4557, 4560, 4567, 4569, 4570, 4575

CONTROL Block


E
F
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 7-D3
9-A2, 9-C6, 10-A6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
EMMA2[0:163]
PSW1
58
R4566
SS
100
5-C3, 5-D1, 5-D3
6-A2, 6-A3, 6-B3
PSW1_1

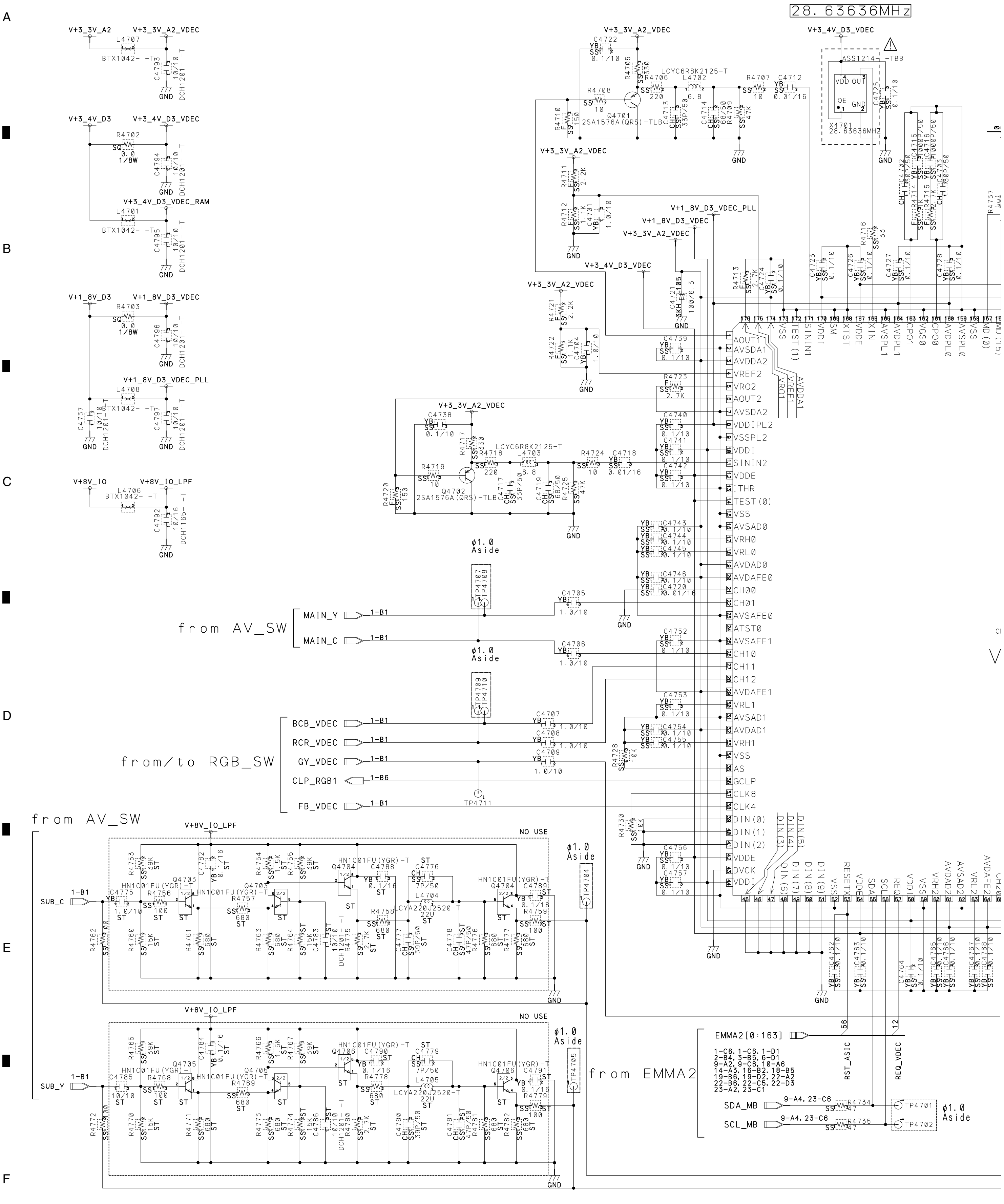
The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.


+3. 5%, -8% 881mAmax
V+6_5V
V+3_4V_D4 for VDEC, HDMI
V+3_4V_D3
Q4522
RTQ045N03-TLB
R4549
NO USE
C4527
100P/50
UMD2N-TLB
Aside ϕ1.0
TP4504
TP4505
C4503
0.1/16
R4519
1K
R4516
10K
C4504
0.1/16
GND
+1%, -1.4% 187mAmax
V+1_8V_D2
for VDEC
V+1_8V_D3
R4557
NO USE
Q4523
RTQ045N03-TLB
C4517
1000P/50
R4530
1K
Aside ϕ1.0
TP4510
TP4511
C4508
0.1/16
C4534
100/6.3
NO USE
STBY SW REG
V+3_4V_ACT +3.5%/-4.5% 614mAmax
V+5_1V_STB
V+3_4V_STB
V+3_4V_ACT
V+3_4V_STB
R4521
100K
NO USE
R4520
10K
Aside ϕ1.0
TP4512
TP4513
R4550
NO USE
Q4501
UPA1917TE-TRB
C4537
0.1/10
R4532
1K
C4536
0.1/10
from IF_UCOM
IF_UCOM[0:100]
1-B6, 1-C1, 1-C1
1-C3, 3-C1, 4-C1
4-C6, 9-D1, 10-A5
11-B6, 11-D1, 19-D2
22-A5, 23-A1
DTC124EUA-TLB
Q4503
ACTIVE
61
C4535
100P/50
NO USE
for EMMA, VBI Slicer, Mod
GND
V+3_4V_ACT
L4501
BTX1039- -T
TP4517
TP4522
TP4523
TP4529
R4534
10K
D4510
RB551V-30-TRB
R4535
10K
D4511
RB551V-30-TRB
R4536
NO USE
V+2_5V_ACT ±3% 225mAmax
for EMMA, VBI Slicer
V+1_5V_ACT
for EMMA, VBI Slicer
V+2_5V_ACT
C4510
BCG1059- -T
22/10
IC4501
LTC3407EMSE-2-TBB
R4553
100K
NO USE
R4538
100K
R4560
NO USE
VFB1
RUN1
VIN
SW1
GND
VFB2
RUN2
POR
SW2
MODE/SYNC
ATH1244- -T
L4502
2.2
ATH1244- -T
L4503
2.2
TP4518
TP4519
Aside ϕ1.0
R4504
NO USE
1/8W
R4505
NO USE
1/8W
Aside ϕ1.0
TP4520
TP4521
C4546
DCH1201- -T
10/10
NO USE
C4548
10/10
R4554
150K
C4518
47P/50
R4558
100K
C4512
C4555
C4513
22/10
BCG1059- -T
NO USE
R4556
C4514
NO USE
C4519
47P/50
R4561
200K
R4562
62K
C4549
10/10
DCH1201- -T
C4550
NO USE
R4563
1K
GND
V+1_5V_ACT ±2.6% 572mAmax
V+3_4V_ACT2 +3.5%, -5% 94mAmax
V+3_4V_ACT2
V+3_4V_ACT
for EMMA, Mod
V+1_5V_ACT
V+5_1V_STB
R4569
NO USE
1/8W
TP4525
TP4526
Aside ϕ1.0
V+3_4V_STB
Q4509
UPA1917TE-TRB
R4572
10K
D4508
1SS352-TRB
NO USE
R4574
10K
R4575
100K
NO USE
C4556
0.1/10
R4576
1K
Aside ϕ1.0
TP4524
Q4521
2SC4081(QR)-TLB
R4573
0
C4555
100P/50
C4559
0.1/10
C4558
100/6.3
CCG1232- -T
NO USE
GND
GND
V+1_5V_ACT2 +2.6%, -2.7% 23mAmax
V+2_5V_ACT
V+5_1V_STB
V+1_5V_ACT
for VBI Slicer
V+1_5V_ACT2
NO USE
D4507
1SS352-TRB
R4559
10K
C4551
100P/50
UMD2N-TLB
Q4516
R4570
NO USE
1/8W
Q4524
RTQ045N03-TLB
C4521
0.01/16
R4577
1K
Aside ϕ1.0
TP4527
TP4528
C4557
100P/50
R4578
10K
C4560
0.1/10
GND

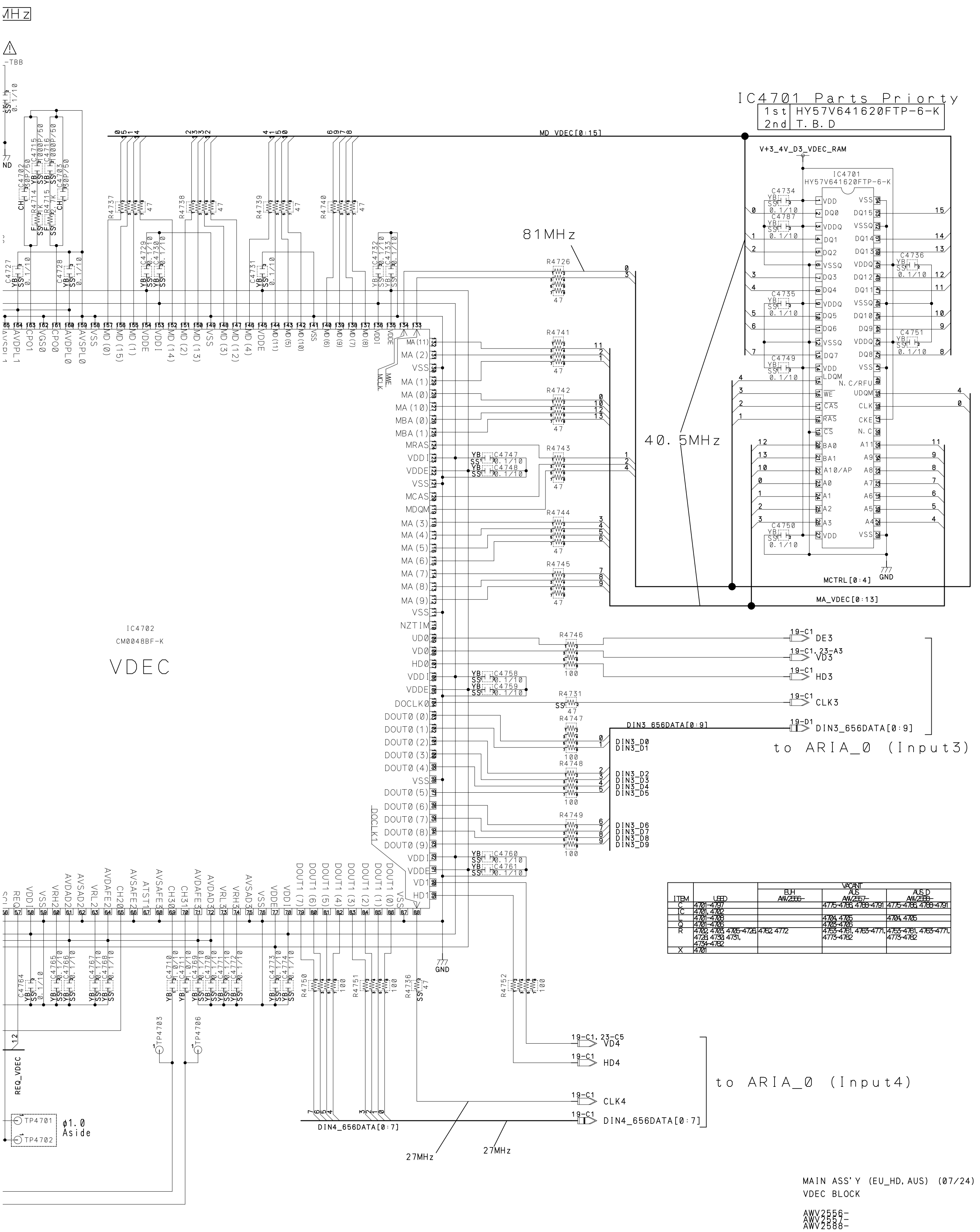
MAIN ASS'Y (EU_HD, AUS) (06/24)
POWER_2 BLOCK

AWV2556-
AWV2557-
AWV2588-

7.7 MAIN ASSY (7/24) [VDEC BLOCK]


28.63636MHz
V+3_3V_A2
V+3_3V_A2_VDEC
V+3_4V_D3
V+3_4V_D3_VDEC
V+3_4V_D3_VDEC_RAM
V+1_8V_D3
V+1_8V_D3_VDEC
V+1_8V_D3_VDEC_PLL
V+8V_IO
V+8V_IO_LPF
BTX1042- -T
DCH1201- -T
DCH1165- -T
2SA1576A(QRS)-TLB
LCYC6R8K2125-T
ASS1214- -TBB
X4701 28.63636MHz
from AV_SW
MAIN_Y
MAIN_C
from/to RGB_SW
BCB_VDEC
RCR_VDEC
GY_VDEC
CLP_RGB1
FB_VDEC
SUB_C
SUB_Y
NO USE
HN1C01FU(YGR)-T
LCYA220J2520-T
ϕ1.0 Aside
from EMMA2
EMMA2[0:163]
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 6-D1
9-A2, 9-C6, 10-A6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
RST_ASIC
REQ_VDEC
SDA_MB
SCL_MB
9-A4, 23-C6
AOUT1
AVSDA1
AVDDA2
VREF2
VRO2
AOUT2
AVSDA2
VDDIPL2
VSSPL2
VDDI
SININ2
VDDE
ITHR
TEST(0)
VSS
AVSAD0
VRH0
VRL0
AVDAD0
AVDAFE0
CH00
CH01
AVSAFE0
ATST0
AVSAFE1
CH10
CH11
CH12
AVDAFE1
VRL1
AVSAD1
AVDAD1
VRH1
AS
GCLP
CLK8
CLK4
DIN(0)
DIN(1)
DIN(2)
DVCK
GND

)



MHz
-TBB
MD_VDEC[0:15]
V+3_4V_D3_VDEC_RAM
IC4701
HY57V641620FTP-6-K
81MHz
40.5MHz
R4726
R4737
R4738
R4739
R4740
R4741
R4742
R4743
R4744
R4745
R4746
R4731
R4747
R4748
R4749
R4750
R4751
R4736
R4752
C4702
C4714
C4715
C4716
C4727
C4728
C4729
C4730
C4731
C4732
C4733
C4734
C4735
C4736
C4749
C4750
C4751
C4787
C4747
C4748
C4758
C4759
C4760
C4761
C4764
C4765
C4766
C4767
C4768
C4769
C4770
C4771
C4772
C4773
C4774
0.1/10
47
100
VDD
DQ0
VDDQ
DQ1
DQ2
VSSQ
DQ3
DQ4
DQ5
DQ6
DQ7
LDQM
WE
CAS
RAS
CS
BA0
BA1
A10/AP
A0
A1
A2
A3
VSS
DQ15
DQ14
DQ13
DQ12
DQ11
DQ10
DQ9
DQ8
N.C/RFU
UDQM
CLK
CKE
N.C
A11
A9
A8
A7
A6
A5
A4
MCTRL[0:4]
MA_VDEC[0:13]
GND
IC4702
CM0048BF-K
VDEC
AVSPL1
AVDPL1
CPO1
VGS0
CPO0
AVDPL0
AVSPL0
VSS
MD(0)
MD(15)
MD(1)
VDDE
VDDI
MD(14)
MD(2)
MD(13)
MD(3)
MD(12)
MD(4)
MD(11)
MD(5)
MD(10)
MD(6)
MD(9)
MD(7)
MD(8)
MA(11)
MA(2)
MA(1)
MA(0)
MA(10)
MBA(0)
MBA(1)
MRAS
MCAS
MDQM
MA(3)
MA(4)
MA(5)
MA(6)
MA(7)
MA(8)
MA(9)
NZTIM
UD0
VD0
HD0
DOCLK0
DOUT0(0)
DOUT0(1)
DOUT0(2)
DOUT0(3)
DOUT0(4)
DOUT0(5)
DOUT0(6)
DOUT0(7)
DOUT0(8)
DOUT0(9)
DOCLK1
VD1
HD1
MWE
MCLK
REQ
VRH2
AVSAD2
VRL2
AVDAFE2
CH20
AVSAFE2
ATST1
AVSAFE3
CH30
CH31
AVDAD3
VRL3
VRH3
AVSAD3
DOUT1(7)
DOUT1(6)
DOUT1(5)
DOUT1(4)
DOUT1(3)
DOUT1(2)
DOUT1(1)
DOUT1(0)
19-C1
DE3
19-C1, 23-A3
VD3
HD3
CLK3
DIN3_656DATA[0:9]
19-D1
DIN3_D0
DIN3_D1
DIN3_D2
DIN3_D3
DIN3_D4
DIN3_D5
DIN3_D6
DIN3_D7
DIN3_D8
DIN3_D9
to ARIA_0 (Input3)
TP4703
TP4706
TP4701
TP4702
φ1.0
Aside
REQ_VDEC
19-C1, 23-C5
VD4
HD4
CLK4
DIN4_656DATA[0:7]
to ARIA_0 (Input4)
27MHz

IC4701 Parts Priorty

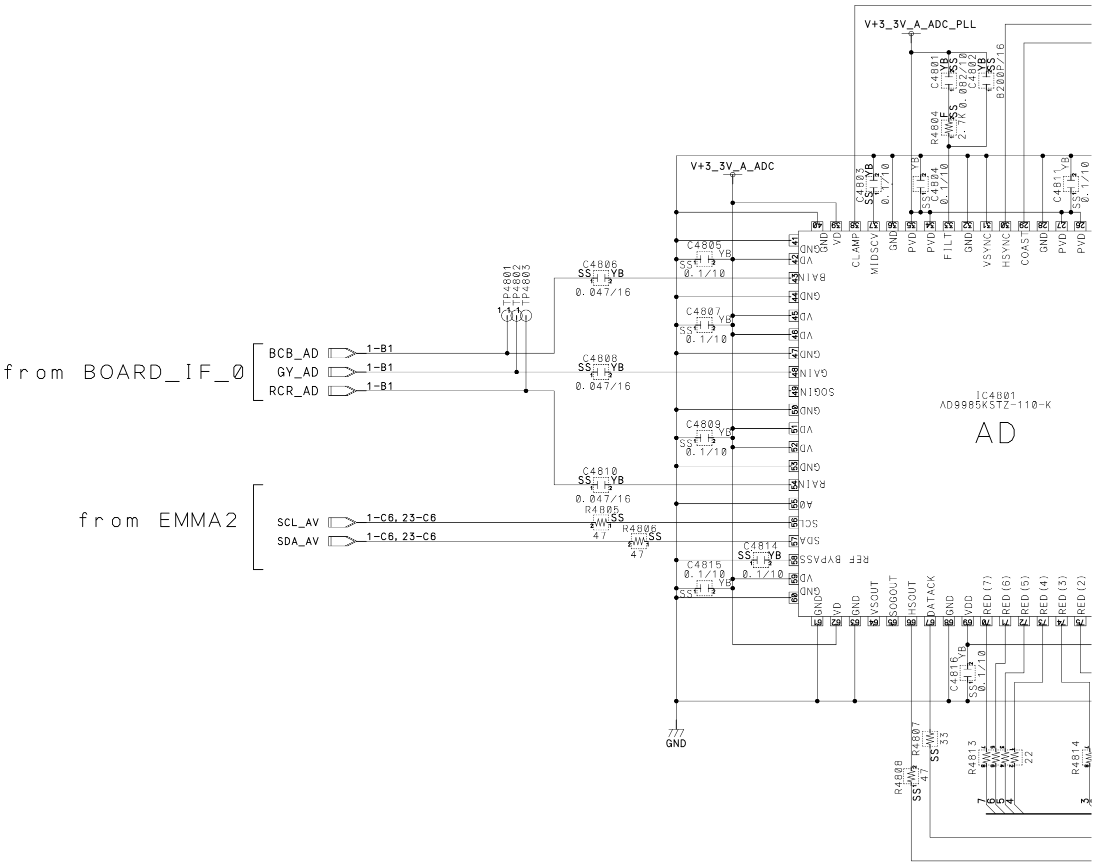
1st	HY57V641620FTP-6-K
2nd	T.B.D

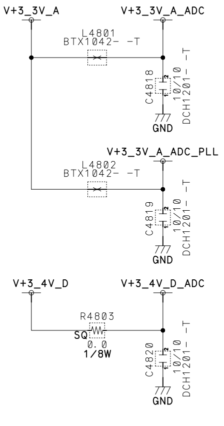
ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	4701-4797		4775-4786, 4788-4791	4775-4786, 4788-4791
IC	4701, 4702			
L	4701-4708		4704, 4705	4704, 4705
Q	4701-4706		4703-4706	
R	4702, 4703, 4705-4726, 4728, 4730, 4731, 4734-4782	4762, 4772	4753-4761, 4763-4771, 4773-4782	4753-4761, 4763-4771, 4773-4782
X	4701			

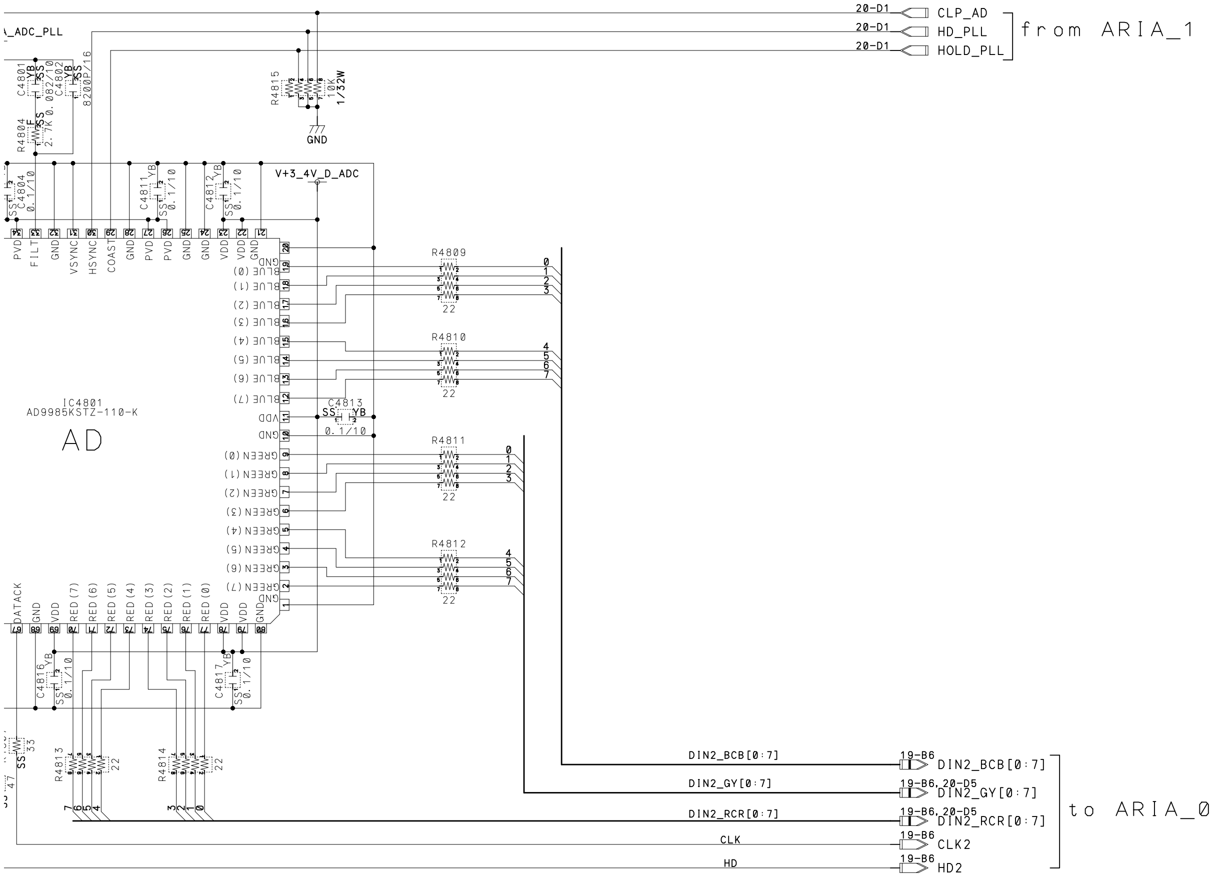
MAIN ASS'Y (EU_HD, AUS) (07/24)
VDEC BLOCK

AWV2556-
AWV2557-
AWV2588-

7.8 MAIN ASSY (8/24) [ADC BLOCK]


V+3_3V_A_ADC_PLL
V+3_3V_A_ADC
C4801 YB SS 0.082/10
C4802 YB SS 8200P/16
R4804 F SS 2.7K
C4803 SS YB 0.1/10
C4804 SS YB 0.1/10
C4811 SS YB 0.1/10
TP4801
TP4802
TP4803
from BOARD_IF_0
BCB_AD
GY_AD
RCR_AD
1-B1
1-B1
1-B1
C4806 SS YB 0.047/16
C4808 SS YB 0.047/16
C4810 SS YB 0.047/16
C4805 SS YB 0.1/10
C4807 SS YB 0.1/10
C4809 SS YB 0.1/10
from EMMA2
SCL_AV
SDA_AV
1-C6, 23-C6
1-C6, 23-C6
R4805 SS 47
R4806 SS 47
C4814 SS YB 0.1/10
C4815 SS YB 0.1/10
C4816 SS YB 0.1/10
GND
IC4801
AD9985KSTZ-110-K
AD
40 GND
39 VD
38 CLAMP
37 MIDSCV
36 GND
35 PVD
34 PVD
33 FILT
32 GND
31 VSYNC
30 HSYNC
29 COAST
28 GND
27 PVD
26 PVD
41 GND
42 VD
43 BAIN
44 GND
45 VD
46 VD
47 GND
48 GAIN
49 SOGIN
50 GND
51 VD
52 VD
53 GND
54 RAIN
55 A0
56 SCL
57 SDA
58 REF BYPASS
59 VD
60 GND
61 GND
62 VD
63 GND
64 VSOUT
65 SOGOUT
66 HSOUT
67 DATACK
68 GND
69 VDD
70 RED(7)
71 RED(6)
72 RED(5)
73 RED(4)
74 RED(3)
75 RED(2)
R4807 SS 33
R4808 SS 47
R4813 22
R4814
7
6
5
4
3


V+3_3V_A
V+3_3V_A_ADC
L4801
BTX1042- -T
C4818
10/10
DCH1201- -T
GND
V+3_3V_A_ADC_PLL
L4802
BTX1042- -T
C4819
10/10
DCH1201- -T
GND
V+3_4V_D
V+3_4V_D_ADC
R4803
SQ
0.0
1/8W
C4820
10/10
DCH1201- -T
GND


CLP_AD
HD_PLL
HOLD_PLL
from ARIA_1
20-D1
_ADC_PLL
R4815
10K
1/32W
GND
C4801
C4802
0.082/10
8200P/16
R4804
2.7K
C4804
0.1/10
C4811
C4812
V+3_4V_D_ADC
PVD
FILT
GND
VSYNC
HSYNC
COAST
VDD
BLUE(0)
BLUE(1)
BLUE(2)
BLUE(3)
BLUE(4)
BLUE(5)
BLUE(6)
BLUE(7)
GREEN(0)
GREEN(1)
GREEN(2)
GREEN(3)
GREEN(4)
GREEN(5)
GREEN(6)
GREEN(7)
DATACK
RED(7)
RED(6)
RED(5)
RED(4)
RED(3)
RED(2)
RED(1)
RED(0)
IC4801
AD9985KSTZ-110-K
AD
C4813
0.1/10
R4809
R4810
R4811
R4812
R4813
R4814
22
33
47
C4816
C4817
SS
YB
DIN2_BCB[0:7]
DIN2_GY[0:7]
DIN2_RCR[0:7]
CLK
HD
19-B6
19-B6, 20-D5
CLK2
HD2
to ARIA_0

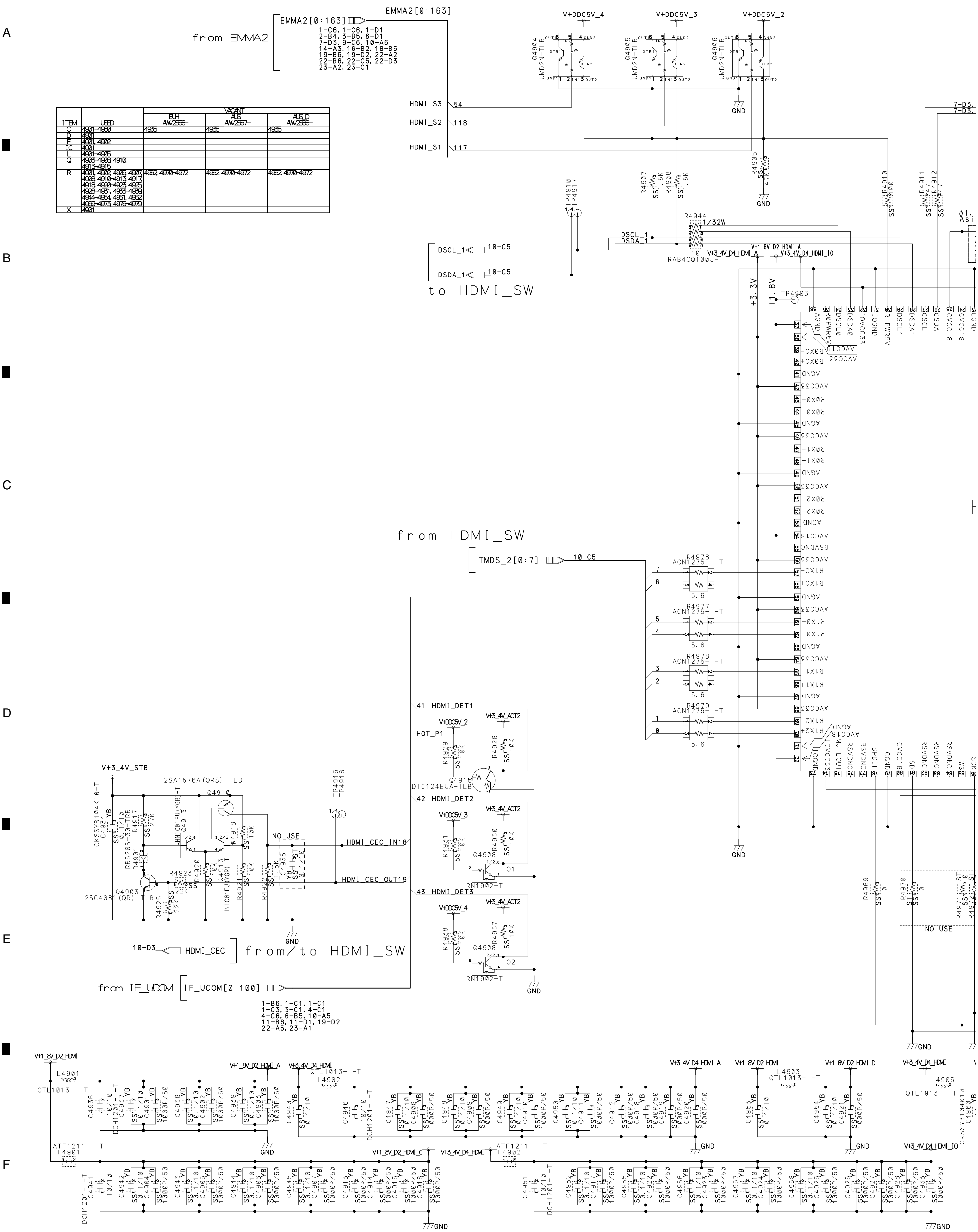
ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	4801-4820			
IC	4801			
L	4801, 4802			
R	4803-4815			

MAIN ASS'Y (EU_HD, AUS) (08/24)
ADC BLOCK

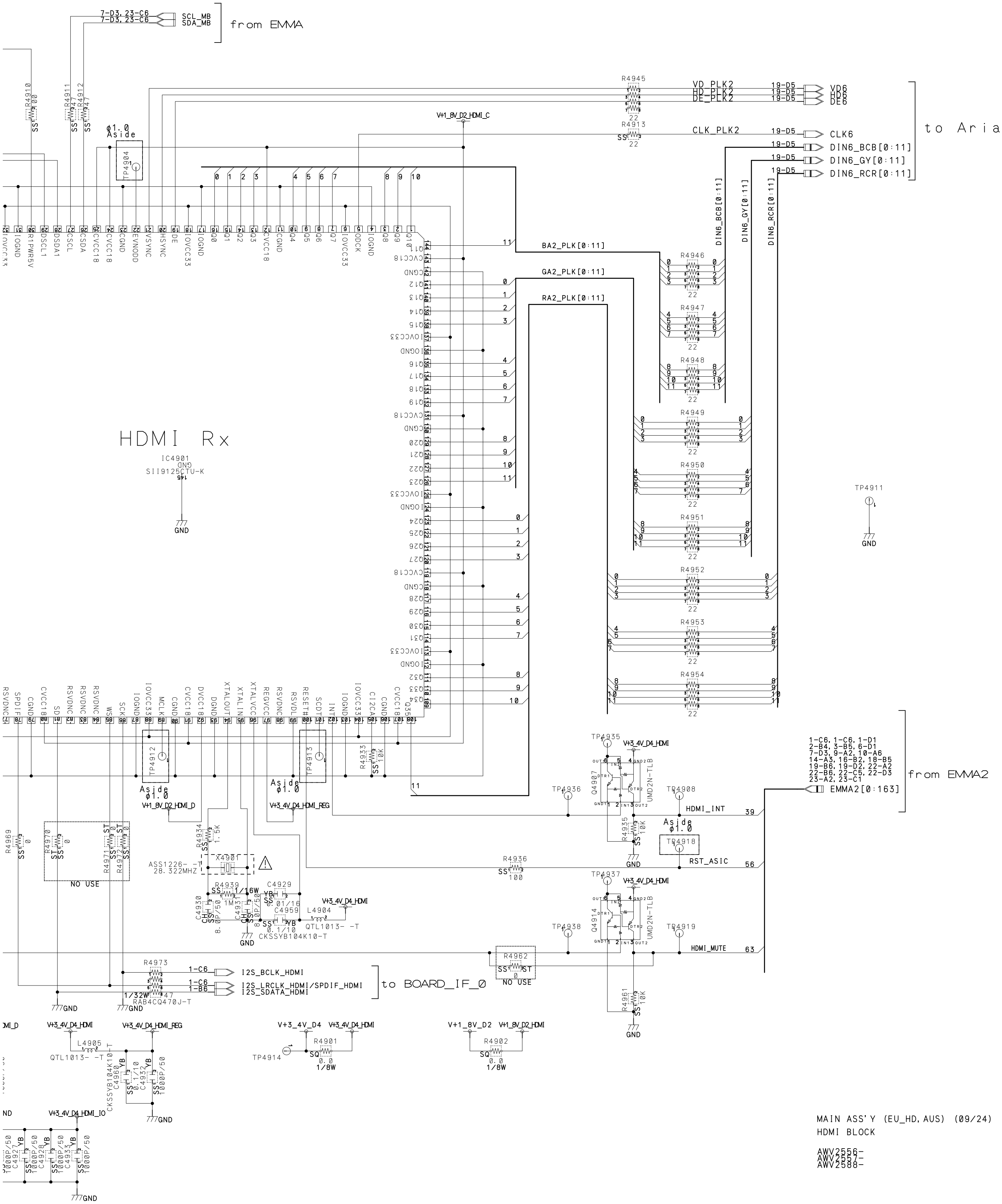
AWV2556-
AWV2557-
AWV2588-

7.9 MAIN ASSY (9/24) [HDMI BLOCK]

ITEM	USED	VACANT		
		EUH AWV2556–	AUS AWV2557–	AUS_D AWV2588–
C	4901–4960	4935	4935	4935
D	4901			
F	4901, 4902			
IC	4901			
L	4901–4905			
Q	4903–4908, 4910, 4913–4915			
R	4901, 4902, 4905, 4907, 4908, 4910–4913, 4917, 4918, 4920–4923, 4925, 4928–4931, 4933–4939, 4944–4954, 4961, 4962, 4969–4973, 4976–4979	4962, 4970–4972	4962, 4970–4972	4962, 4970–4972
X	4901			



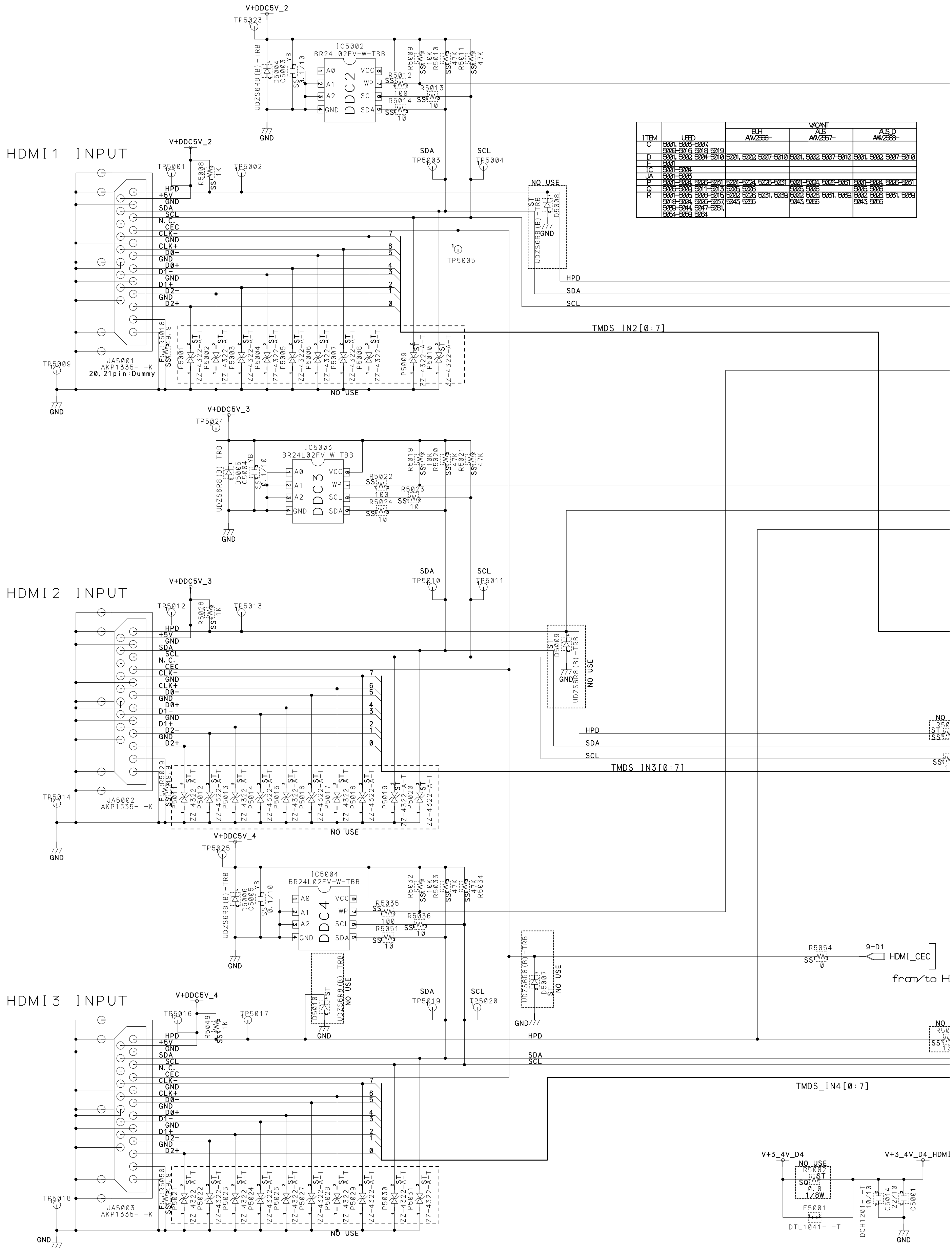
A
B
C
D
E
F
from EMMA2
EMMA2[0:163]
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 6-D1
7-D3, 9-C6, 10-A6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
HDMI_S3 54
HDMI_S2 118
HDMI_S1 117
V+DDC5V_4
V+DDC5V_3
V+DDC5V_2
Q4904 UMD2N-TLB
Q4905 UMD2N-TLB
Q4906 UMD2N-TLB
GND
R4905 47K
R4907 1.5K
R4908 1.5K
R4910 100
R4911 47
R4912 47
TP4910
TP4917
R4944 1/32W
10 RAB4CQ100J-T
DSCL_1
DSDA_1
DSCL_1 10-C5
DSDA_1 10-C5
to HDMI_SW
V+1_8V_D2_HDMI_A
V+3_4V_D4_HDMI_A
V+3_4V_D4_HDMI_IO
+3.3V
+1.8V
TP4903
7-D3,
7-D3,
AGND
R0PWR5V
DSCL0
DSDA0
IOVCC33
IOGND
R1PWR5V
DSCL1
DSDA1
CSCL
CSDA
CVCC18
CGND
AVCC18
AVCC33
R0XC-
R0XC+
R0X0-
R0X0+
R0X1-
R0X1+
R0X2-
R0X2+
RSVDNC
R1XC-
R1XC+
R1X0-
R1X0+
R1X1-
R1X1+
R1X2-
R1X2+
MUTEOUT
SPDIF
SD
WS
SCK
from HDMI_SW
TMDS_2[0:7] 10-C5
R4976 ACN1275- -T 5.6
R4977 ACN1275- -T 5.6
R4978 ACN1275- -T 5.6
R4979 ACN1275- -T 5.6
41 HDMI_DET1
42 HDMI_DET2
43 HDMI_DET3
V+DDC5V_2
V+DDC5V_3
V+DDC5V_4
V+3_4V_ACT2
HOT_P1
R4929 10K
R4928 10K
Q4915 DTC124EUA-TLB
R4931 10K
R4930 10K
Q4908 RN1902-T Q1
R4938 10K
R4937 10K
Q4908 RN1902-T Q2
V+3_4V_STB
2SA1576A(QRS)-TLB
Q4910
CKSSYB104K10-T C4934
RB520S-30-TRB D4901
R4917 27K
HN1C01FU(YGR)-T Q4913
R4918 10K
R4920 10K
R4921 10K
R4922 1.5K
R4923 22K
R4925 22K
Q4903 2SC4081(QR)-TLB
NO_USE
C4935 0.1/10
TP4915
TP4916
HDMI_CEC_IN18
HDMI_CEC_OUT19
10-D3 HDMI_CEC from/to HDMI_SW
from IF_UCOM IF_UCOM[0:100]
1-B6, 1-C1, 1-C1
1-C3, 3-C1, 4-C1
4-C6, 6-B5, 10-A5
11-B6, 11-D1, 19-D2
22-A5, 23-A1
R4969 0
R4970 0
R4971 0
R4972 0
NO USE
V+1_8V_D2_HDMI
L4901 QTL1013- -T
V+1_8V_D2_HDMI_A
V+3_4V_D4_HDMI
L4902 QTL1013- -T
V+3_4V_D4_HDMI_A
V+1_8V_D2_HDMI
L4903 QTL1013- -T
V+1_8V_D2_HDMI_D
V+3_4V_D4_HDMI
L4905 QTL1013- -T
C4936 DCH1201- -T 10/10
C4937 0.1/10
C4901 1000P/50
C4938 0.1/10
C4902 1000P/50
C4939 0.1/10
C4903 1000P/50
C4940 0.1/10
C4946 DCH1201- -T 10/10
C4947 0.1/10
C4908 1000P/50
C4948 0.1/10
C4909 1000P/50
C4949 0.1/10
C4910 1000P/50
C4950 0.1/10
C4911 1000P/50
C4912 1000P/50
C4918 1000P/50
C4919 1000P/50
C4920 1000P/50
C4953 0.1/10
C4954 0.1/10
C4921 1000P/50
ATF1211- -T F4901
C4941 DCH1201- -T 10/10
C4942 0.1/10
C4904 1000P/50
C4943 0.1/10
C4905 1000P/50
C4944 0.1/10
C4906 1000P/50
C4945 0.1/10
C4907 1000P/50
C4913 1000P/50
C4914 1000P/50
C4915 1000P/50
C4916 1000P/50
V+1_8V_D2_HDMI_C
V+3_4V_D4_HDMI
ATF1211- -T F4902
C4951 DCH1201- -T 10/10
C4952 0.1/10
C4917 1000P/50
C4955 0.1/10
C4922 1000P/50
C4956 0.1/10
C4923 1000P/50
C4957 0.1/10
C4924 1000P/50
C4958 0.1/10
C4925 1000P/50
C4926 1000P/50
C4927 1000P/50
C4928 1000P/50
C4933 1000P/50
V+3_4V_D4_HDMI_IO
CKSSYB104K10-T C4960
GND


HDMI Rx
IC4901
SII9125CTU-K
from EMMA
SCL_MB
SDA_MB
7-D3, 23-C6
to Aria
VD_PLK2
HD_PLK2
DE_PLK2
CLK_PLK2
VD6
HD6
DE6
CLK6
DIN6_BCB[0:11]
DIN6_GY[0:11]
DIN6_RCR[0:11]
19-D5
BA2_PLK[0:11]
GA2_PLK[0:11]
RA2_PLK[0:11]
R4945
R4913
R4946
R4947
R4948
R4949
R4950
R4951
R4952
R4953
R4954
22
V+1_8V_D2_HDMI_C
V+1_8V_D2_HDMI_D
V+3_4V_D4_HDMI_REG
V+3_4V_D4_HDMI
V+3_4V_D4_HDMI_IO
V+3_4V_D4
V+1_8V_D2
TP4904
TP4911
TP4912
TP4913
TP4914
TP4918
TP4935
TP4936
TP4937
TP4938
TP4908
TP4919
Aside
φ1.0
from EMMA2
EMMA2[0:163]
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 6-D1
7-D3, 9-A2, 10-A6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
HDMI_INT
RST_ASIC
HDMI_MUTE
39
56
63
Q4907
Q4914
UMD2N-TLB
R4935
R4936
R4961
R4962
10K
100
NO USE
X4901
ASS1226- -T
28.322MHZ
R4934
1.5K
R4939
1M
C4929
C4930
C4931
C4959
L4904
L4905
QTL1013- -T
CKSSYB104K10-T
R4969
R4970
R4971
R4972
R4973
RAB4CQ470J-T
1/32W
47
to BOARD_IF_0
I2S_BCLK_HDMI
I2S_LRCLK_HDMI/SPDIF_HDMI
I2S_SDATA_HDMI
1-C6
1-B6
R4901
R4902
SQ
0.0
1/8W
C4960
C4932
C4927
C4928
C4933
0.1/10
1000P/50
R4910
R4911
R4912
R4933
GND

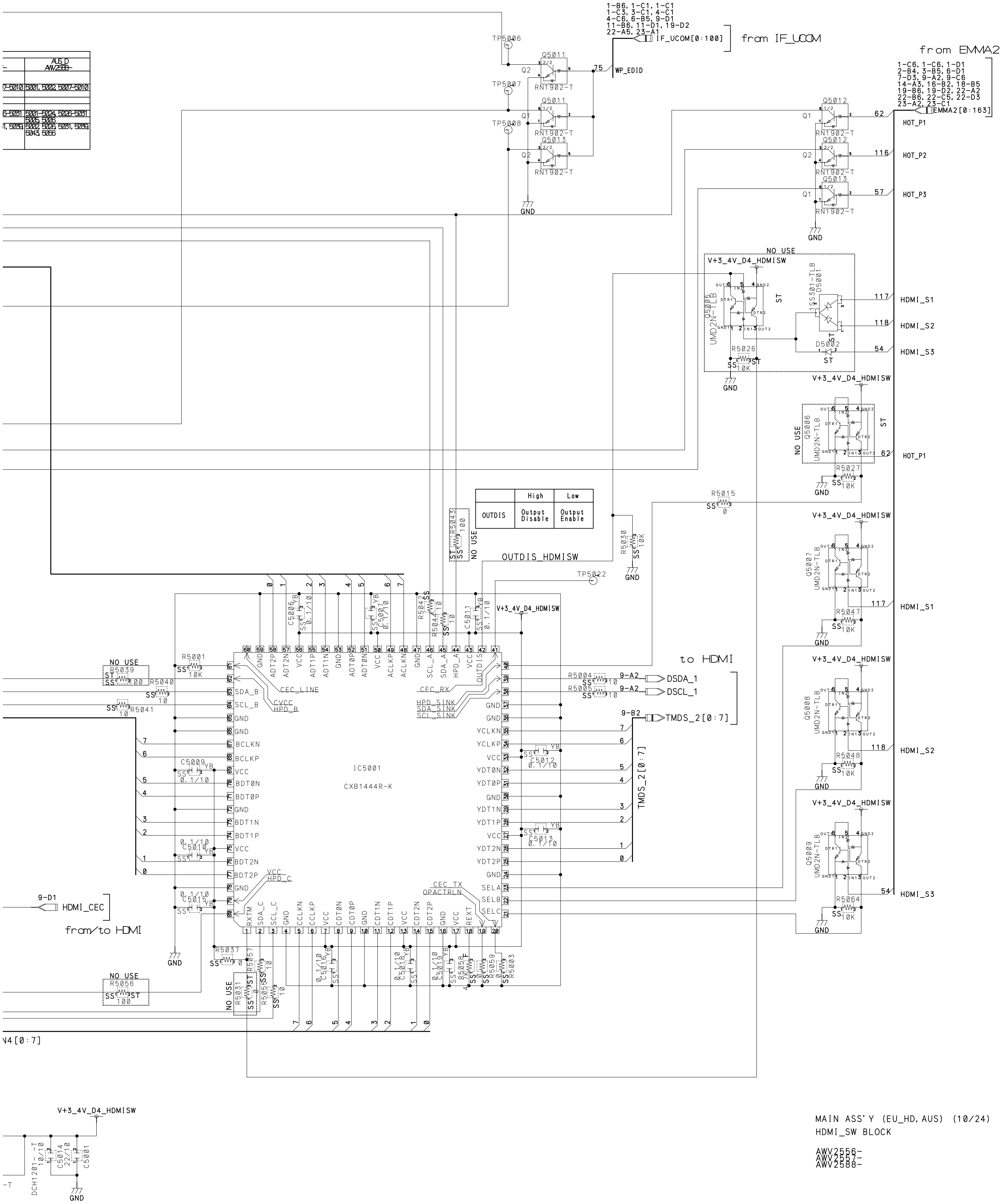
MAIN ASS'Y (EU_HD,AUS) (09/24)
HDMI BLOCK

AWV2556-
AWV2557-
AWV2588-

7.10 MAIN ASSY (10/24) [HDMI_SW BLOCK]


A
B
C
D
E
F
V+DDC5V_2
TP5023
IC5002
BR24L02FV-W-TBB
DDC2
A0
A1
A2
GND
VCC
WP
SCL
SDA
UDZS6R8(B)-TRB
D5004
C5003
0.1/10
YB
R5009
10K
R5010
47K
R5011
47K
R5012
100
R5013
10
R5014
10
GND
HDMI1 INPUT
V+DDC5V_2
TP5001
R5008
1K
TP5002
SDA
TP5003
SCL
TP5004
NO USE
D5008
UDZS6R8(B)-TRB
HPD
+5V
GND
SDA
SCL
N.C.
CEC
CLK-
GND
CLK+
D0-
GND
D0+
D1-
GND
D1+
D2-
GND
D2+
TP5005
HPD
SDA
SCL
TMDS_IN2[0:7]
R5018
49.9
P5001
P5002
P5003
P5004
P5005
P5006
P5007
P5008
P5009
P5010
ZZ-4322-A-T
NO USE
JA5001
AKP1335- -K
20,21pin:Dummy
TP5009
GND
V+DDC5V_3
TP5024
IC5003
BR24L02FV-W-TBB
DDC3
D5005
C5004
0.1/10
R5019
10K
R5020
47K
R5021
47K
R5022
100
R5023
10
R5024
10
GND
HDMI2 INPUT
V+DDC5V_3
TP5012
R5028
1K
TP5013
SDA
TP5010
SCL
TP5011
D5009
UDZS6R8(B)-TRB
NO USE
HPD
SDA
SCL
TMDS_IN3[0:7]
R5029
49.9
P5011
P5012
P5013
P5014
P5015
P5016
P5017
P5018
P5019
P5020
NO USE
JA5002
AKP1335- -K
TP5014
GND
V+DDC5V_4
TP5025
IC5004
BR24L02FV-W-TBB
DDC4
D5006
C5005
0.1/10
R5032
10K
R5033
47K
R5034
47K
R5035
100
R5036
10
R5051
10
GND
D5010
UDZS6R8(B)-TRB
NO USE
D5007
UDZS6R8(B)-TRB
NO USE
R5054
0
9-D1
HDMI_CEC
from/to H
HDMI3 INPUT
V+DDC5V_4
TP5016
R5049
1K
TP5017
SDA
TP5019
SCL
TP5020
HPD
SDA
SCL
TMDS_IN4[0:7]
R5050
49.9
P5021
P5022
P5023
P5024
P5025
P5026
P5027
P5028
P5029
P5030
P5031
NO USE
JA5003
AKP1335- -K
TP5018
GND
V+3_4V_D4
NO USE
R5002
0.0
1/8W
F5001
DTL1041- -T
DCH1201- -T
10/10
C5014
22/10
C5001
V+3_4V_D4_HDMI
GND

ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	5001, 5003-5007, 5009-5016, 5018, 5019			
D	5001, 5002, 5004-5010	5001, 5002, 5007-5010	5001, 5002, 5007-5010	5001, 5002, 5007-5010
F	5001			
IC	5001-5004			
JA	5001-5003			
P	5001-5024, 5026-5031	5001-5024, 5026-5031	5001-5024, 5026-5031	5001-5024, 5026-5031
Q	5005-5009, 5011-5013	5005, 5006	5005, 5006	5005, 5006
R	5001-5005, 5008-5015, 5018-5024, 5026-5037, 5039-5044, 5047-5051, 5054-5059, 5064	5002, 5026, 5031, 5039, 5043, 5056	5002, 5026, 5031, 5039, 5043, 5056	5002, 5026, 5031, 5039, 5043, 5056

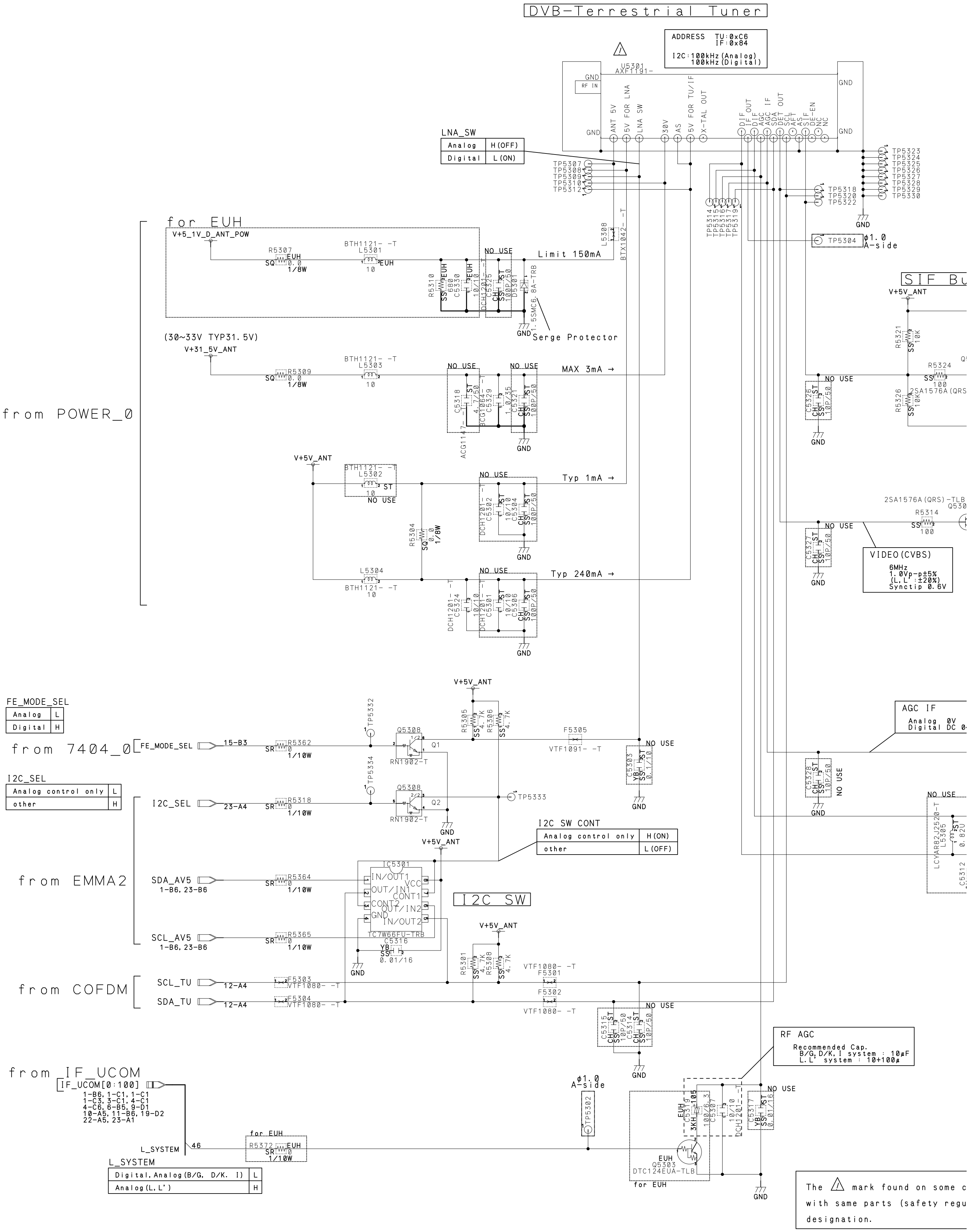

1-B6, 1-C1, 1-C1
1-C3, 3-C1, 4-C1
4-C6, 6-B5, 9-D1
11-B6, 11-D1, 19-D2
22-A5, 23-A1
IF_UCOM[0:100]
from IF_UCOM
from EMMA2
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 6-D1
7-D3, 9-A2, 9-C6
14-A3, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
EMMA2[0:163]
AUS D
AWV2588-
TP5006
TP5007
TP5008
TP5022
Q5011
Q5012
Q5013
RN1902-T
WP_EDID
75
HOT_P1
HOT_P2
HOT_P3
62
116
57
GND
NO USE
V+3_4V_D4_HDMISW
Q5005
UMD2N-TLB
1SS301-TLB
D5001
D5002
R5026
10K
ST
HDMI_S1
HDMI_S2
HDMI_S3
117
118
54
Q5006
R5027
Q5007
R5047
Q5008
R5048
Q5009
R5064
R5015
R5030
R5043
OUTDIS_HDMISW
IC5001
CXB1444R-K
to HDMI
R5004
R5005
9-A2
DSDA_1
DSCL_1
9-B2
TMDS_2[0:7]
9-D1
HDMI_CEC
from/to HDMI
R5001
R5039
R5040
R5041
R5037
R5057
R5056
R5031
R5055
R5058
R5059
R5003
R5042
R5044
C5006
C5007
C5011
C5009
C5010
C5015
C5012
C5013
C5016
C5018
C5019
C5014
C5001
DCH1201-T
SDA_B
SCL_B
BCLKN
BCLKP
BDT0N
BDT0P
BDT1N
BDT1P
BDT2N
BDT2P
VCC
GND
ADT2P
ADT2N
ADT1P
ADT1N
ADT0P
ADT0N
ACLKP
ACLKN
SCL_A
SDA_A
HPD_A
OUTDIS
CEC_LINE
CVCC
HPD_B
CEC_RX
HPD_SINK
SDA_SINK
SCL_SINK
YCLKN
YCLKP
YDT0N
YDT0P
YDT1N
YDT1P
YDT2N
YDT2P
SELA
SELB
SELC
CEC_TX
OPACTRLN
HPD_C
RXTM
SDA_C
SCL_C
CCLKN
CCLKP
CDT0N
CDT0P
CDT1N
CDT1P
CDT2N
CDT2P
REXT
N4[0:7]

	High	Low
OUTDIS	Output Disable	Output Enable

MAIN ASS'Y (EU_HD, AUS) (10/24)
HDMI_SW BLOCK

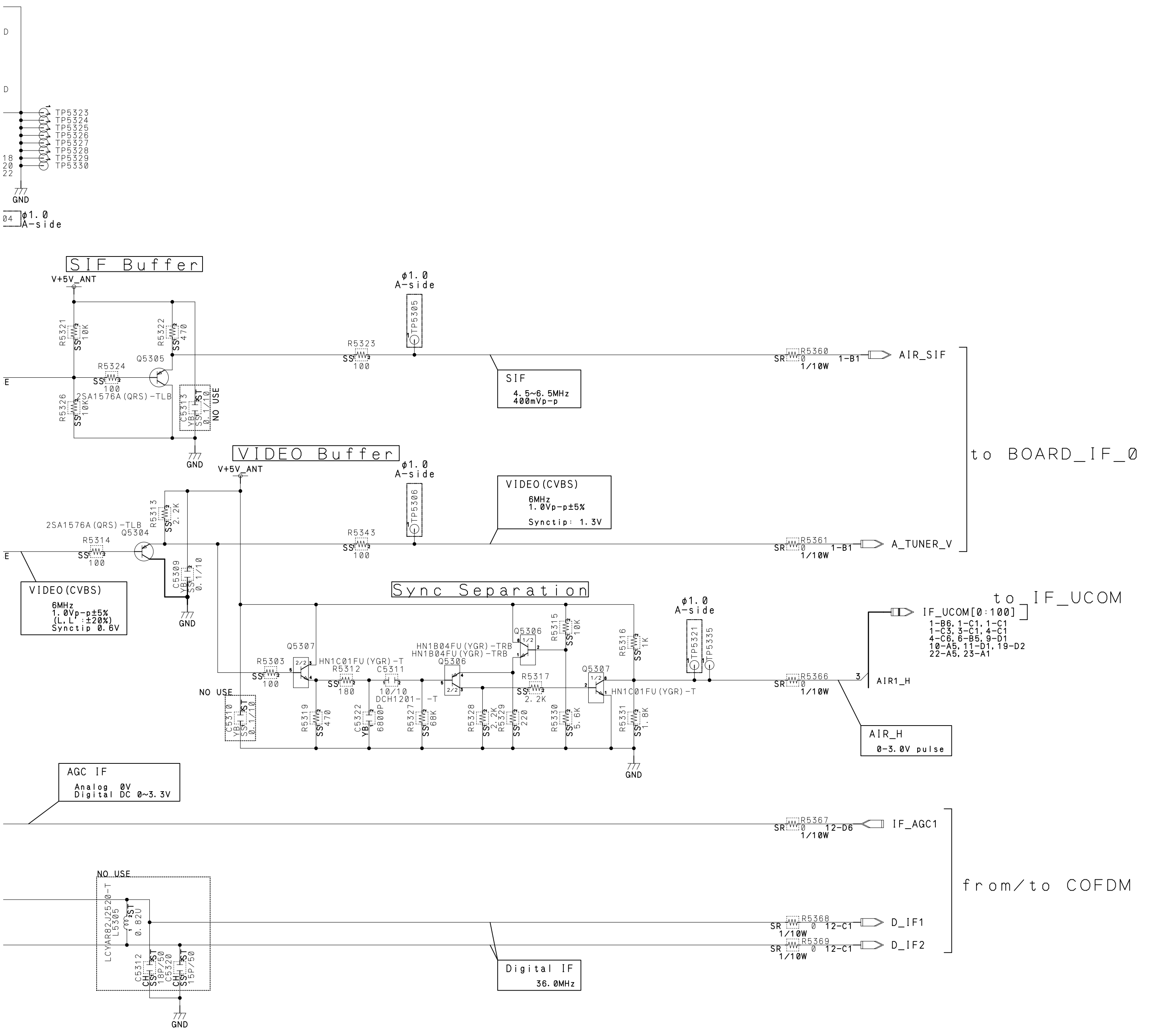
AWV2556-
AWV2557-
AWV2588-

7.11 MAIN ASSY (11/24) [DTB_T TUNER BLOCK]



DVB-Terrestrial Tuner
ADDRESS TU:0xC6 IF:0x84
I2C:100kHz(Analog) 100kHz(Digital)
U5301 AXF1191-
GND
RF IN
ANT 5V
5V FOR LNA
LNA SW
30V
AS
5V FOR TU/IF
X-TAL OUT
DIF
DIF OUT
AGC IF
AGC
SDA
DET OUT
SCL
AS
SIF
DE-EN
NC
NC
LNA_SW
Analog H(OFF)
Digital L(ON)
TP5307
TP5308
TP5309
TP5310
TP5312
TP5314
TP5315
TP5316
TP5317
TP5319
TP5318
TP5320
TP5322
TP5323
TP5324
TP5325
TP5326
TP5327
TP5328
TP5329
TP5330
TP5304
φ1.0 A-side
for EUH
V+5_1V_D_ANT_POW
R5307 EUH SQ 0.0 1/8W
BTH1121- -T L5301 EUH 10
R5310 SS EUH 680
C5330 10/10
DCH1201- -T
C5325 CH ST 100P/50
D5301
1.5SMC6.8A-TRB
NO USE
Limit 150mA
L5308
BTX1042- -T
GND
Serge Protector
from POWER_0
(30~33V TYP31.5V)
V+31_5V_ANT
R5309 SQ 0.0 1/8W
BTH1121- -T L5303 10
C5318
ACG1147- -T
BCG1064- -T
C5329 4.7/50 1.0/35
C5321 CH SST 100P/50
NO USE
MAX 3mA →
V+5V_ANT
BTH1121- -T L5302 10 ST NO USE
R5304 SQ 0.0 1/8W
C5302 DCH1201- -T 10/10
C5304 CH SST 100P/50
Typ 1mA →
L5304 BTH1121- -T 10
DCH1201- -T C5324 10/10
C5301 DCH1201- -T
C5306 CH SST 100P/50
Typ 240mA →
SIF Bu
V+5V_ANT
R5321 SS 10K
R5324 SS 100
R5326 SS 10K
2SA1576A(QRS
C5326 CH SST 10P/50
2SA1576A(QRS)-TLB Q530
R5314 SS 100
C5327 CH SST 10P/50
VIDEO(CVBS)
6MHz 1.0Vp-p±5% (L,L':±20%) Synctip 0.6V
FE_MODE_SEL
Analog L
Digital H
from 7404_0
FE_MODE_SEL 15-B3
R5362 SR 0 1/10W
TP5332
Q5308 Q1 RN1902-T
V+5V_ANT
R5305 SS 4.7K
R5306 SS 4.7K
F5305 VTF1091- -T
C5303 YB SST 0.1/10
NO USE
AGC IF
Analog 0V
Digital DC 0
C5328 CH SST 10P/50
NO USE
I2C_SEL
Analog control only L
other H
I2C_SEL 23-A4
R5318 SR 0 1/10W
TP5334
Q5308 Q2 RN1902-T
TP5333
I2C SW CONT
Analog control only H(ON)
other L(OFF)
LCYAR82J2520-T L5305 0.82U ST
C5312
from EMMA2
SDA_AV5 1-B6, 23-B6
R5364 SR 0 1/10W
IC5301
IN/OUT1
OUT/IN1
CONT2
GND
VCC
CONT1
OUT/IN2
IN/OUT2
TC7W66FU-TRB
C5316 YB SS 0.01/16
I2C SW
SCL_AV5 1-B6, 23-B6
R5365 SR 0 1/10W
from COFDM
SCL_TU 12-A4
SDA_TU 12-A4
F5303 VTF1080- -T
F5304 VTF1080- -T
R5301 SS 4.7K
R5308 SS 4.7K
VTF1080- -T F5301
F5302 VTF1080- -T
C5315 CH SST 10P/50
C5314 CH SST 10P/50
RF AGC
Recommended Cap.
B/G,D/K,I system : 10μF
L.L' system : 10+100μ
from IF_UCOM
IF_UCOM[0:100]
1-B6,1-C1,1-C1
1-C3,3-C1,4-C1
4-C6,6-B5,9-D1
10-A5,11-B6,19-D2
22-A5,23-A1
L_SYSTEM 46
for EUH
R5372 EUH SR 0 1/10W
L_SYSTEM
Digital,Analog(B/G, D/K, I) L
Analog(L,L') H
φ1.0 A-side
TP5302
EUH C5319 3KH 105
C5307 100/6.3
DCH1201- -T 10/10
C5317 YB SST 0.01/16
EUH Q5303 DTC124EUA-TLB
for EUH
GND

The ⚠ mark found on some c
with same parts (safety regu
designation.



D
D
TP5323
TP5324
TP5325
TP5326
TP5327
TP5328
TP5329
TP5330
18
20
22
GND
04
φ1.0
A-side
SIF Buffer
V+5V_ANT
R5321 SS 1/16W 10K
R5322 SS 1/16W 470
Q5305
R5324 SS 100
2SA1576A(QRS)-TLB
R5326 SS 10K
C5313 YB SS 0.1/10 NO USE
GND
φ1.0
A-side
TP5305
R5323 SS 100
SIF
4.5~6.5MHz
400mVp-p
R5360 SR 0 1/10W
1-B1
AIR_SIF
to BOARD_IF_0
VIDEO Buffer
V+5V_ANT
φ1.0
A-side
TP5306
VIDEO(CVBS)
6MHz
1.0Vp-p±5%
Synctip: 1.3V
2SA1576A(QRS)-TLB
R5313 SS 2.2K
Q5304
R5314 SS 100
C5309 YB SS 0.1/10
R5343 SS 100
R5361 SR 0 1/10W
1-B1
A_TUNER_V
VIDEO(CVBS)
6MHz
1.0Vp-p±5%
(L,L':±20%)
Synctip 0.6V
GND
E
E
Sync Separation
φ1.0
A-side
TP5321
TP5335
to IF_UCOM
IF_UCOM[0:100]
1-B6,1-C1,1-C1
1-C3,3-C1,4-C1
4-C6,6-B5,9-D1
10-A5,11-D1,19-D2
22-A5,23-A1
Q5307
HN1C01FU(YGR)-T
HN1B04FU(YGR)-TRB
HN1B04FU(YGR)-TRB
Q5306
Q5306
R5315 SS 10K
R5316 SS 1K
Q5307
HN1C01FU(YGR)-T
R5303 SS 100
R5312 SS 180
C5311 10/10 DCH1201- -T
R5317 SS 2.2K
R5366 SR 0 1/10W
3
AIR1_H
NO USE
C5310 YB SS 0.1/10
R5319 SS 470
C5322 YB 6800P
R5327 SS 68K
R5328 SS 2.2K
R5329 SS 220
R5330 SS 5.6K
R5331 SS 1.8K
GND
AIR_H
0-3.0V pulse
AGC IF
Analog 0V
Digital DC 0~3.3V
R5367 SR 0 1/10W
12-D6
IF_AGC1
from/to COFDM
NO USE
LCYAR82J2520-T
L5305
0.82U
C5312 CH SS 18P/50
C5320 CH SS 15P/50
R5368 SR 0 1/10W
12-C1
D_IF1
R5369 SR 0 1/10W
12-C1
D_IF2
Digital IF
36.0MHz
GND

ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	5301-5304, 5306, 5307, 5309-5322, 5324-5330	5301-5304, 5306, 5310, 5312-5315, 5317, 5318, 5320, 5321, 5325-5328	5301-5304, 5306, 5310, 5312-5315, 5317, 5318, 5320, 5321, 5325-5328	5301-5304, 5306, 5310, 5312-5315, 5317, 5318, 5320, 5321, 5325-5328
D	5301			
F	5301-5305			
IC	5301			
L	5301-5305, 5308	5302, 5305	5302, 5305	5302, 5305
Q	5303-5308			
R	5301, 5303-5310, 5312-5319, 5321-5324, 5326-5331, 5343, 5360-5362, 5364-5369, 5372			
U	5301			

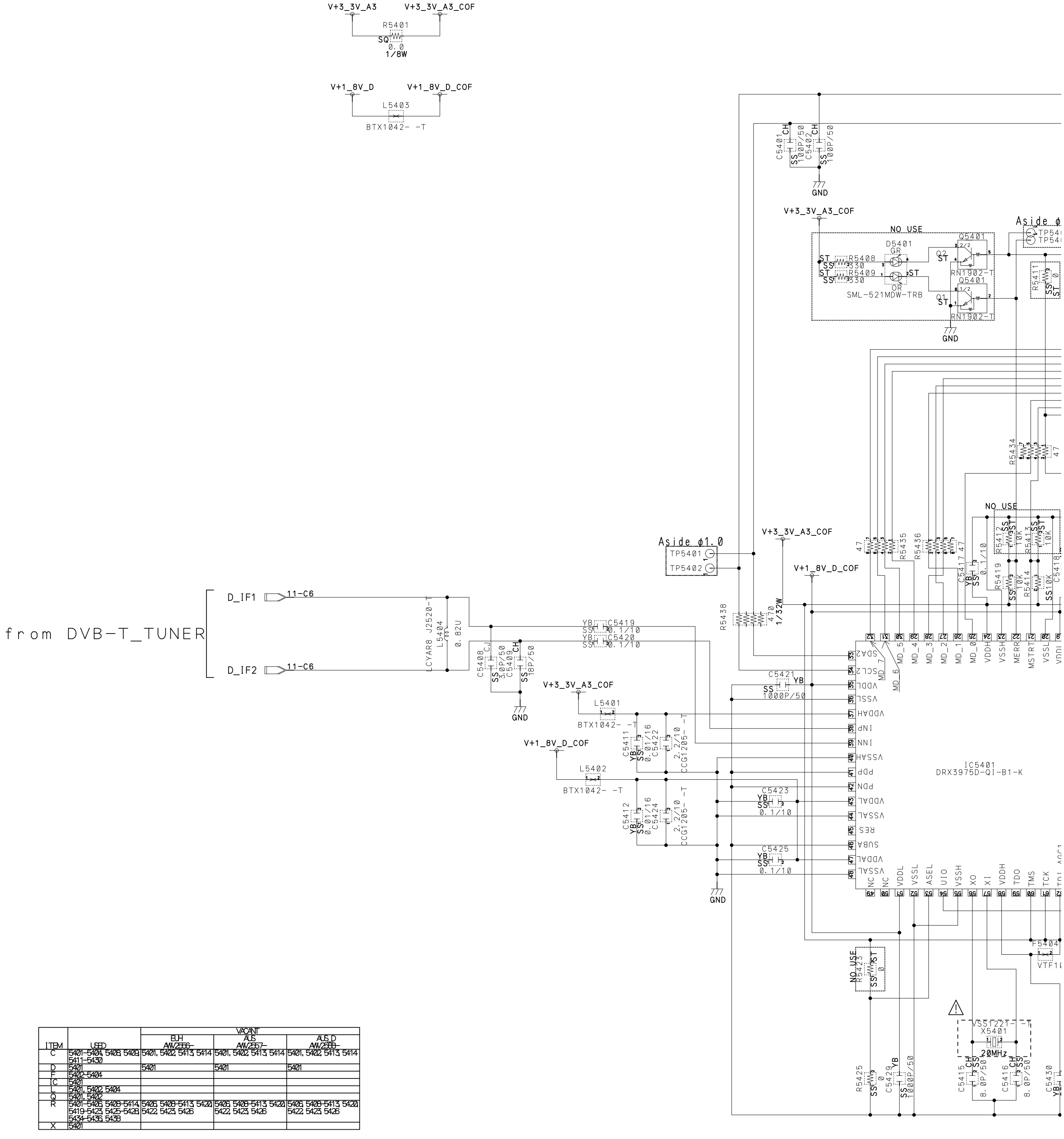
Cap.
system : 10μF
m : 10+100μ

mark found on some component parts should be replaced
ne parts (safety regulation authorized) of identical
tion.

MAIN ASS'Y (EU_HD, AUS) (11/24)
DTB_T TUNER BLOCK

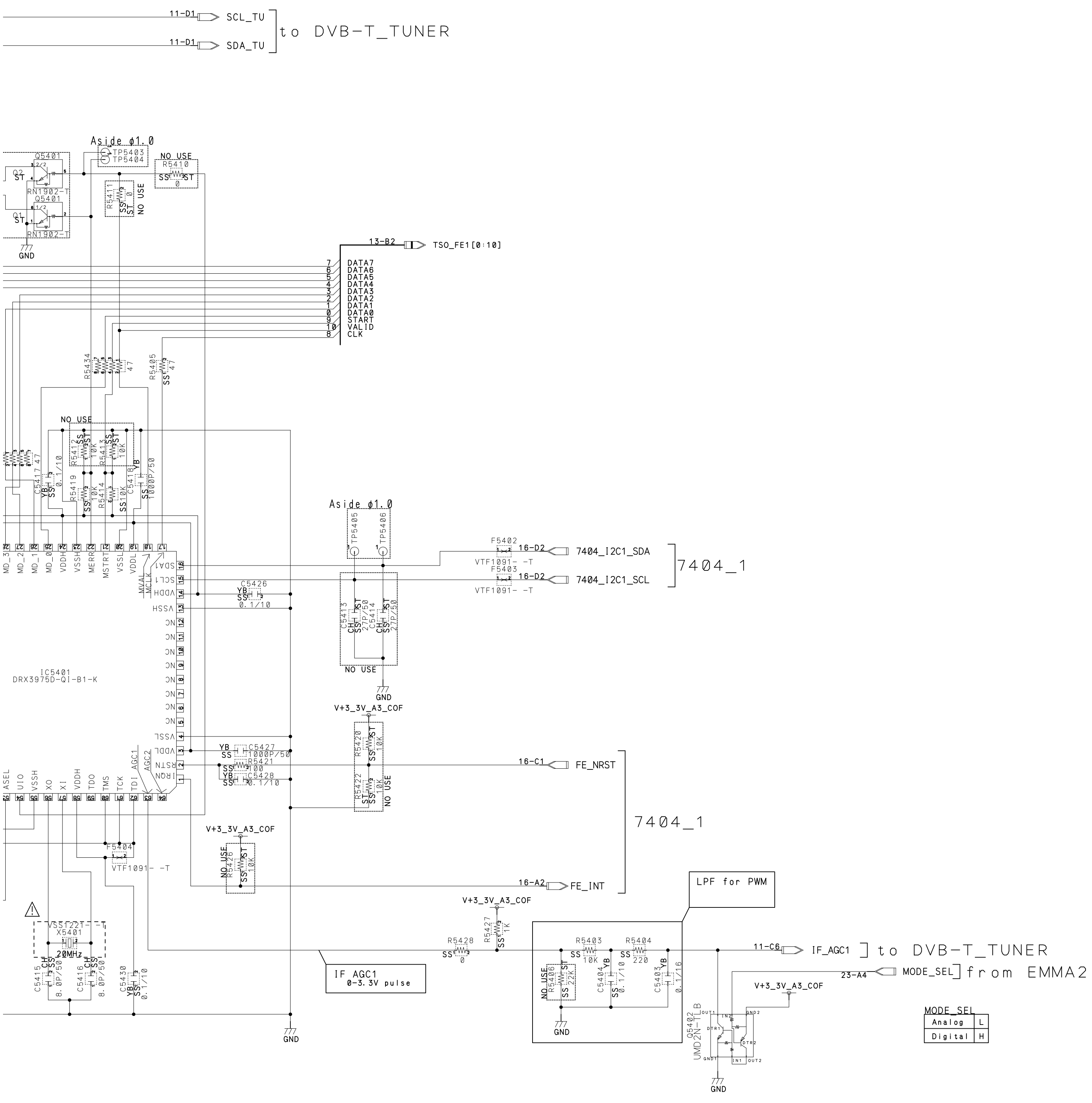
AWV2556-
AWV2557-
AWV2588-

7.12 MAIN ASSY (12/24) [COFDM BLOCK]



V+3_3V_A3
V+3_3V_A3_COF
R5401
SQ
0.0
1/8W
V+1_8V_D
V+1_8V_D_COF
L5403
BTX1042- -T
C5401
CH
100P/50
C5402
CH
100P/50
SS
GND
V+3_3V_A3_COF
NO USE
D5401
GR
OR
R5408
330
R5409
330
SML-521MDW-TRB
Q5401
RN1902-T
ST
Q2
Q1
Aside ϕ1.0
TP5401
TP5402
R5411
R5434
47
R5435
R5436
R5412
R5413
10K
R5419
R5414
C5417
0.1/10
C5418
R5438
470
1/32W
V+3_3V_A3_COF
V+1_8V_D_COF
from DVB-T_TUNER
D_IF1
D_IF2
11-C6
LCYAR8 J2520-T
L5404
0.82U
C5408
CJ
30P/50
C5409
18P/50
C5419
C5420
0.1/10
YB
L5401
BTX1042- -T
C5411
0.01/16
C5422
2.2/10
CCG1205- -T
L5402
C5412
C5424
C5421
1000P/50
C5423
C5425
0.1/10
IC5401
DRX3975D-QI-B1-K
SDA2
SCL2
VDDL
VSSL
VDDAH
INP
INN
VSSAH
PDP
PDN
VDDAL
VSSAL
RES
SUBA
MD_7
MD_6
MD_5
MD_4
MD_3
MD_2
MD_1
MD_0
VDDH
VSSH
MERR
MSTRT
NC
ASEL
UIO
XO
XI
TDO
TMS
TCK
F5404
VTF1
NO USE
R5423
0
R5425
C5429
1000P/50
VSS1221- -T
X5401
20MHz
C5415
C5416
8.0P/50
C5430

ITEM	USED	VACANT		
		EUH AWV2556–	AUS AWV2557–	AUS_D AWV2588–
C	5401–5404, 5408, 5409, 5411–5430	5401, 5402, 5413, 5414	5401, 5402, 5413, 5414	5401, 5402, 5413, 5414
D	5401	5401	5401	5401
F	5402–5404			
IC	5401			
L	5401, 5402, 5404			
Q	5401, 5402			
R	5401–5406, 5408–5414, 5419–5423, 5425–5428, 5434–5436, 5438	5406, 5408–5413, 5420, 5422, 5423, 5426	5406, 5408–5413, 5420, 5422, 5423, 5426	5406, 5408–5413, 5420, 5422, 5423, 5426
X	5401			

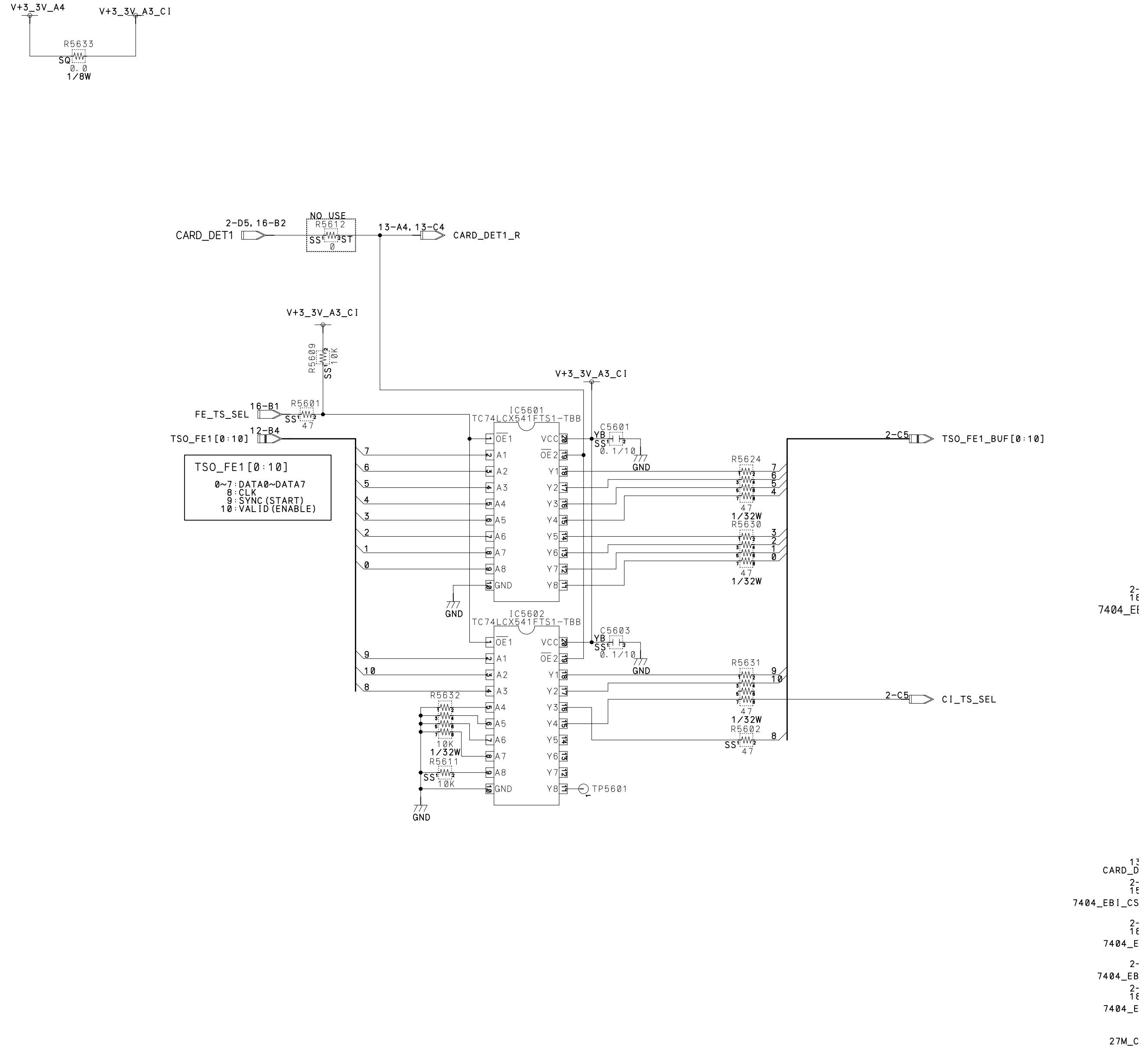


SCL_TU
SDA_TU
to DVB-T_TUNER
Aside ϕ1.0
TP5403
TP5404
NO USE
R5410
Q5401
RN1902-T
R5411
TSO_FE1[0:10]
DATA7
DATA6
DATA5
DATA4
DATA3
DATA2
DATA1
DATA0
START
VALID
CLK
R5434
R5405
R5412
R5413
R5419
R5414
C5417
C5418
IC5401
DRX3975D-QI-B1-K
TP5405
TP5406
F5402
F5403
VTF1091- -T
7404_I2C1_SDA
7404_I2C1_SCL
7404_1
C5426
C5413
C5414
V+3_3V_A3_COF
R5420
R5422
C5427
R5421
C5428
FE_NRST
R5426
F5404
FE_INT
X5401
20MHz
C5415
C5416
C5430
LPF for PWM
R5428
R5427
R5403
R5404
R5406
C5404
C5403
IF AGC1
0-3.3V pulse
IF_AGC1
to DVB-T_TUNER
MODE_SEL
from EMMA2
Q5402
UMD2N-T1B
GND
MODE_SEL
Analog L
Digital H

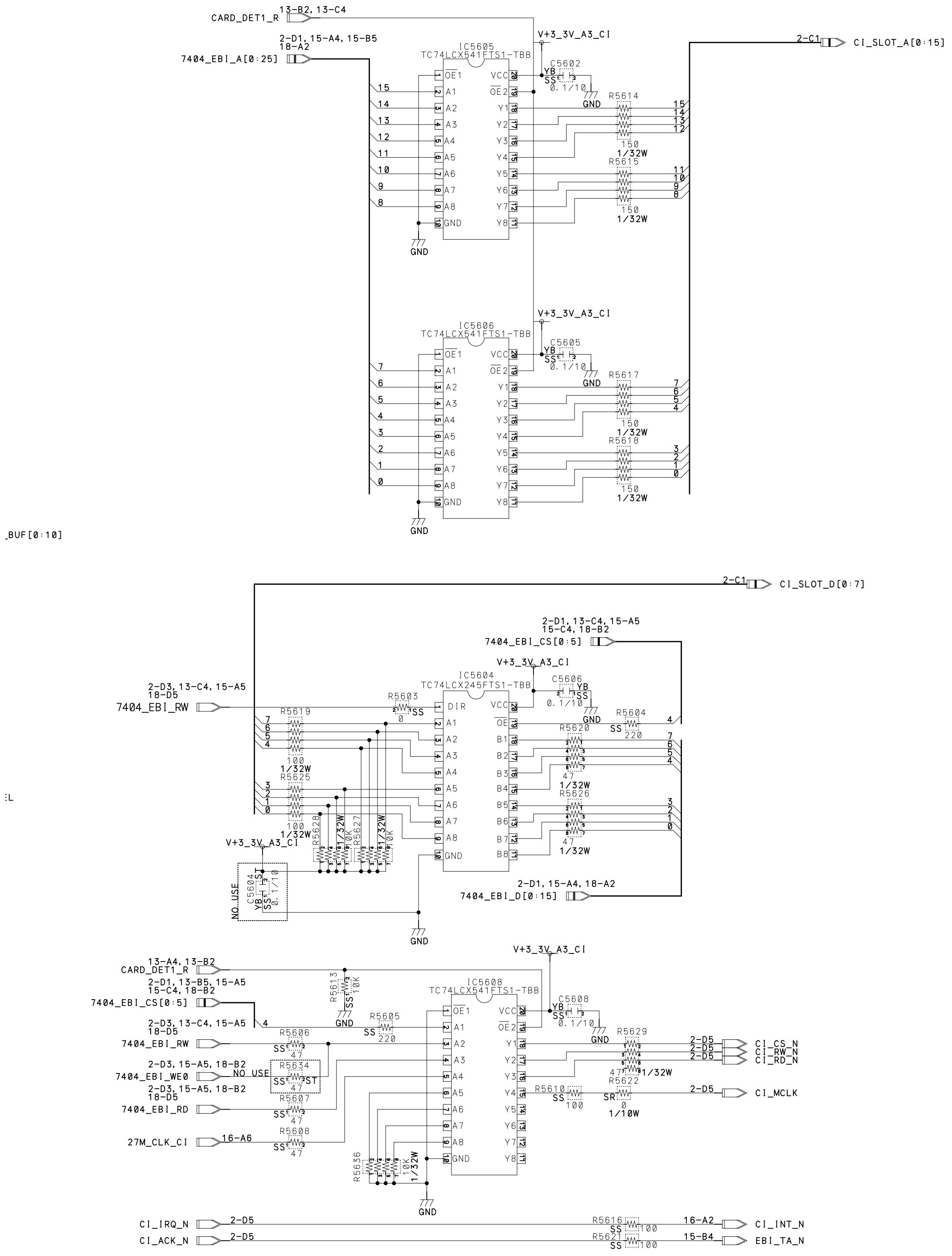
MAIN ASS'Y (EU_HD,AUS) (12/24)
COFDM BLOCK

AWV2556-
AWV2557-
AWV2588-

7.13 MAIN ASSY (13/24) [COMMON_IF BLOCK]


V+3_3V_A4
V+3_3V_A3_CI
R5633
SQ
0.0
1/8W
2-D5, 16-B2
CARD_DET1
NO USE
R5612
SS
ST
0
13-A4, 13-C4
CARD_DET1_R
V+3_3V_A3_CI
R5609
SS
10K
16-B1
FE_TS_SEL
R5601
SS
47
12-B4
TSO_FE1[0:10]
TSO_FE1[0:10]
0~7:DATA0~DATA7
8:CLK
9:SYNC(START)
10:VALID(ENABLE)
V+3_3V_A3_CI
IC5601
TC74LCX541FTS1-TBB
OE1
A1
A2
A3
A4
A5
A6
A7
A8
GND
VCC
OE2
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
GND
C5601
YB
SS
0.1/10
GND
2-C5
TSO_FE1_BUF[0:10]
R5624
47
1/32W
R5630
47
1/32W
IC5602
TC74LCX541FTS1-TBB
C5603
YB
SS
0.1/10
GND
R5631
47
1/32W
R5602
SS
47
2-C5
CI_TS_SEL
R5632
10K
1/32W
R5611
SS
10K
GND
TP5601
2-
18
7404_EB
13
CARD_D
2-
15
7404_EBI_CS
2-
18
7404_E
2-
7404_EB
2-
18
7404_E
27M_C
CI_
CI_

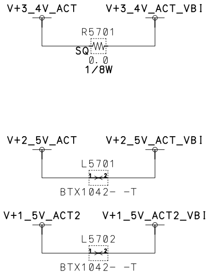
ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	5601-5606, 5608	5604	5604	5604
IC	5601, 5602, 5604-5606, 5608			
R	5601-5622, 5624-5634, 5636	5612, 5634	5612, 5634	5612, 5634

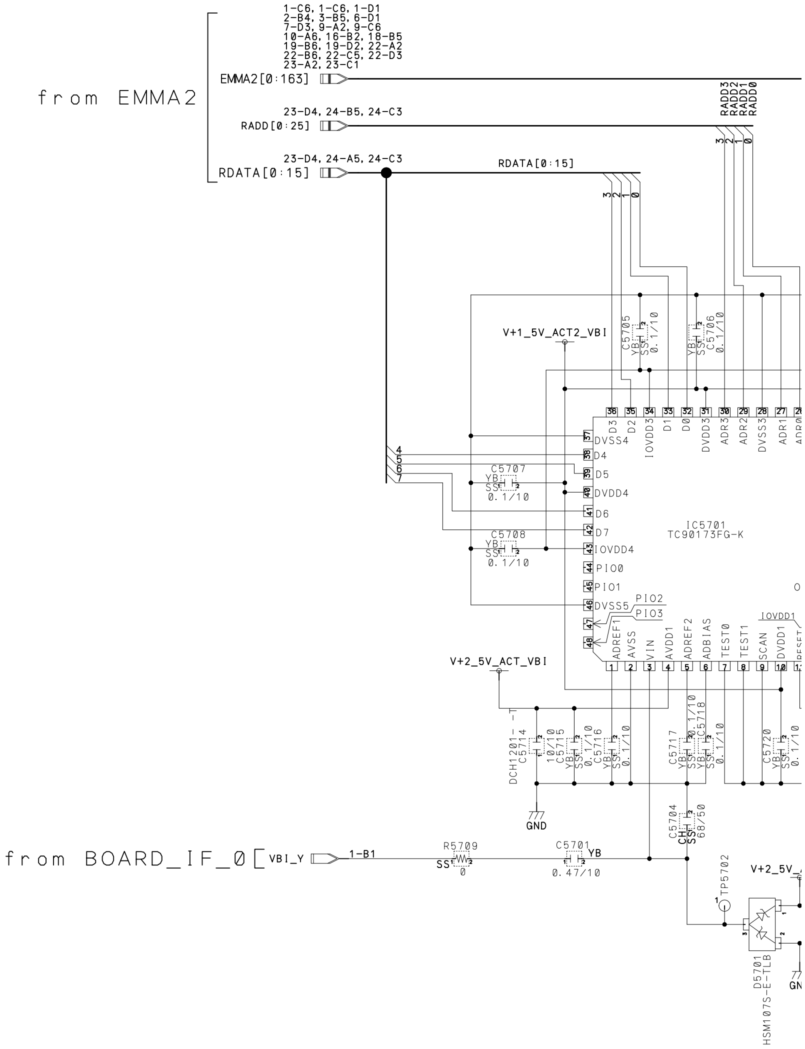

CARD_DET1_R
13-B2, 13-C4
2-D1, 15-A4, 15-B5
18-A2
7404_EBI_A[0:25]
IC5605
TC74LCX541FTS1-TBB
V+3_3V_A3_CI
C5602
YB
SS
0.1/10
GND
R5614
150
1/32W
R5615
2-C1
CI_SLOT_A[0:15]
OE1 A1 A2 A3 A4 A5 A6 A7 A8 GND
VCC OE2 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
IC5606
C5605
R5617
R5618
_BUF[0:10]
CI_SLOT_D[0:7]
2-D1, 13-C4, 15-A5
15-C4, 18-B2
7404_EBI_CS[0:5]
IC5604
TC74LCX245FTS1-TBB
C5606
2-D3, 13-C4, 15-A5
18-D5
7404_EBI_RW
R5603
R5619
100
R5625
R5628
R5627
10K
R5604
220
R5620
47
R5626
DIR B1 B2 B3 B4 B5 B6 B7 B8 OE
C5604
NO USE
2-D1, 15-A4, 18-A2
7404_EBI_D[0:15]
EL
13-A4, 13-B2
CARD_DET1_R
2-D1, 13-B5, 15-A5
15-C4, 18-B2
7404_EBI_CS[0:5]
R5613
10K
IC5608
TC74LCX541FTS1-TBB
C5608
R5605
220
R5606
47
7404_EBI_RW
2-D3, 15-A5, 18-B2
7404_EBI_WE0
NO USE
R5634
ST
7404_EBI_RD
R5607
R5608
27M_CLK_CI
16-A6
R5636
R5629
47
1/32W
2-D5
CI_CS_N
CI_RW_N
CI_RD_N
R5610
100
R5622
SR
0
1/10W
CI_MCLK
CI_IRQ_N
CI_ACK_N
R5616
R5621
16-A2
15-B4
CI_INT_N
EBI_TA_N

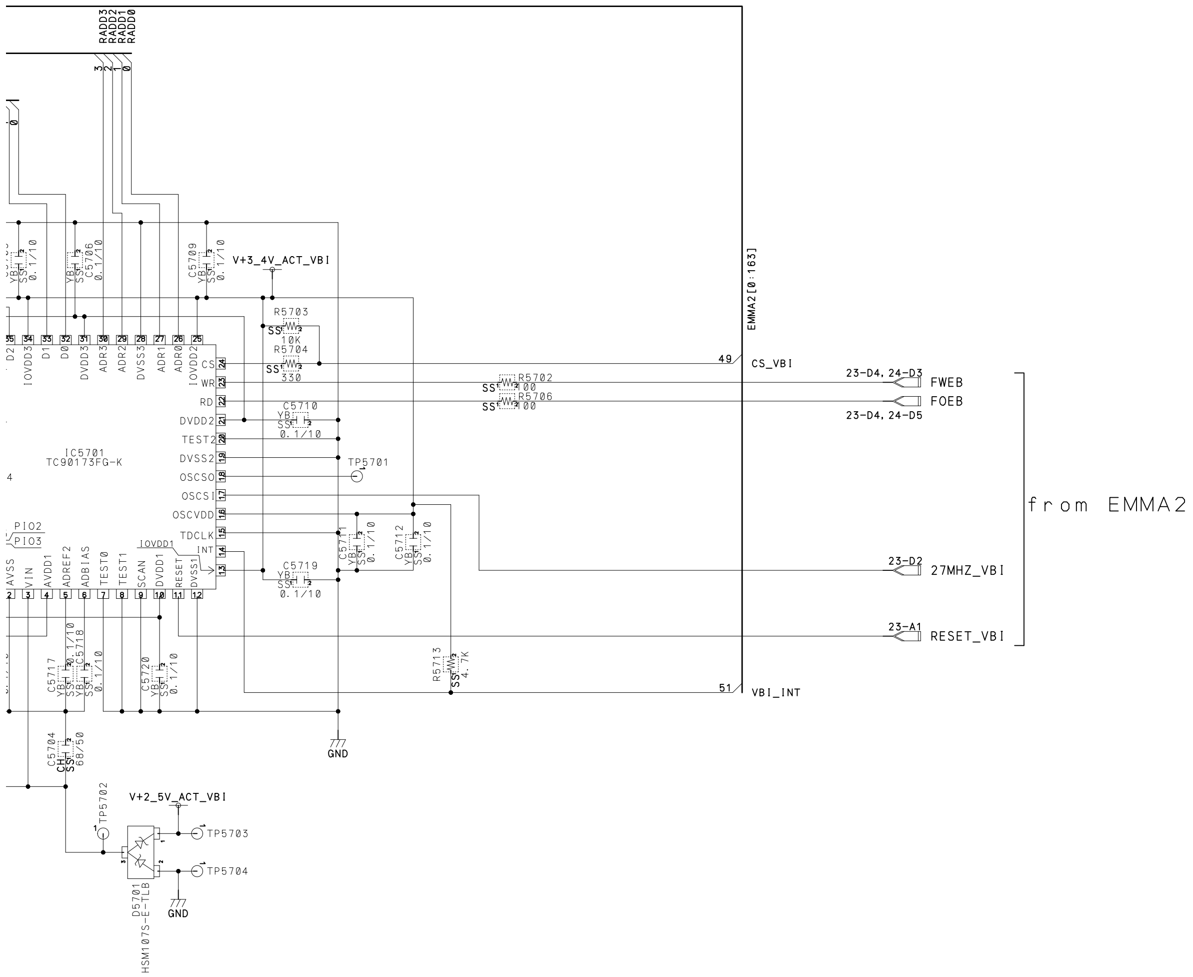
MAIN ASS'Y (EU_HD,AUS) (13/24)
COMMON_IF BLOCK

AWV2556-
AWV2557-
AWV2588-

7.14 MAIN ASSY (14/24) [VBI_SLICER BLOCK]


V+3_4V_ACT
V+3_4V_ACT_VBI
R5701
SQ
0.0
1/8W
V+2_5V_ACT
V+2_5V_ACT_VBI
L5701
BTX1042- -T
V+1_5V_ACT2
V+1_5V_ACT2_VBI
L5702
BTX1042- -T


from EMMA2
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 6-D1
7-D3, 9-A2, 9-C6
10-A6, 16-B2, 18-B5
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
EMMA2[0:163]
23-D4, 24-B5, 24-C3
RADD[0:25]
23-D4, 24-A5, 24-C3
RDATA[0:15]
RDATA[0:15]
RADD3
RADD2
RADD1
RADD0
V+1_5V_ACT2_VBI
C5705
YB
SS
0.1/10
C5706
0.1/10
C5707
0.1/10
C5708
0.1/10
IC5701
TC90173FG-K
D3
D2
IOVDD3
D1
D0
DVDD3
ADR3
ADR2
DVSS3
ADR1
DVSS4
D4
D5
DVDD4
D6
D7
IOVDD4
PIO0
PIO1
DVSS5
PIO2
PIO3
ADREF1
AVSS
VIN
AVDD1
ADREF2
ADBIAS
TEST0
TEST1
SCAN
DVDD1
IOVDD1
V+2_5V_ACT_VBI
DCH1201- -T
C5714
10/10
C5715
C5716
0.1/10
C5717
C5718
C5720
GND
from BOARD_IF_0
VBI_Y
1-B1
R5709
SS
0
C5701
YB
0.47/10
C5704
CH
SS
68/50
TP5702
V+2_5V
D5701
HSM107S-E-TLB
GN

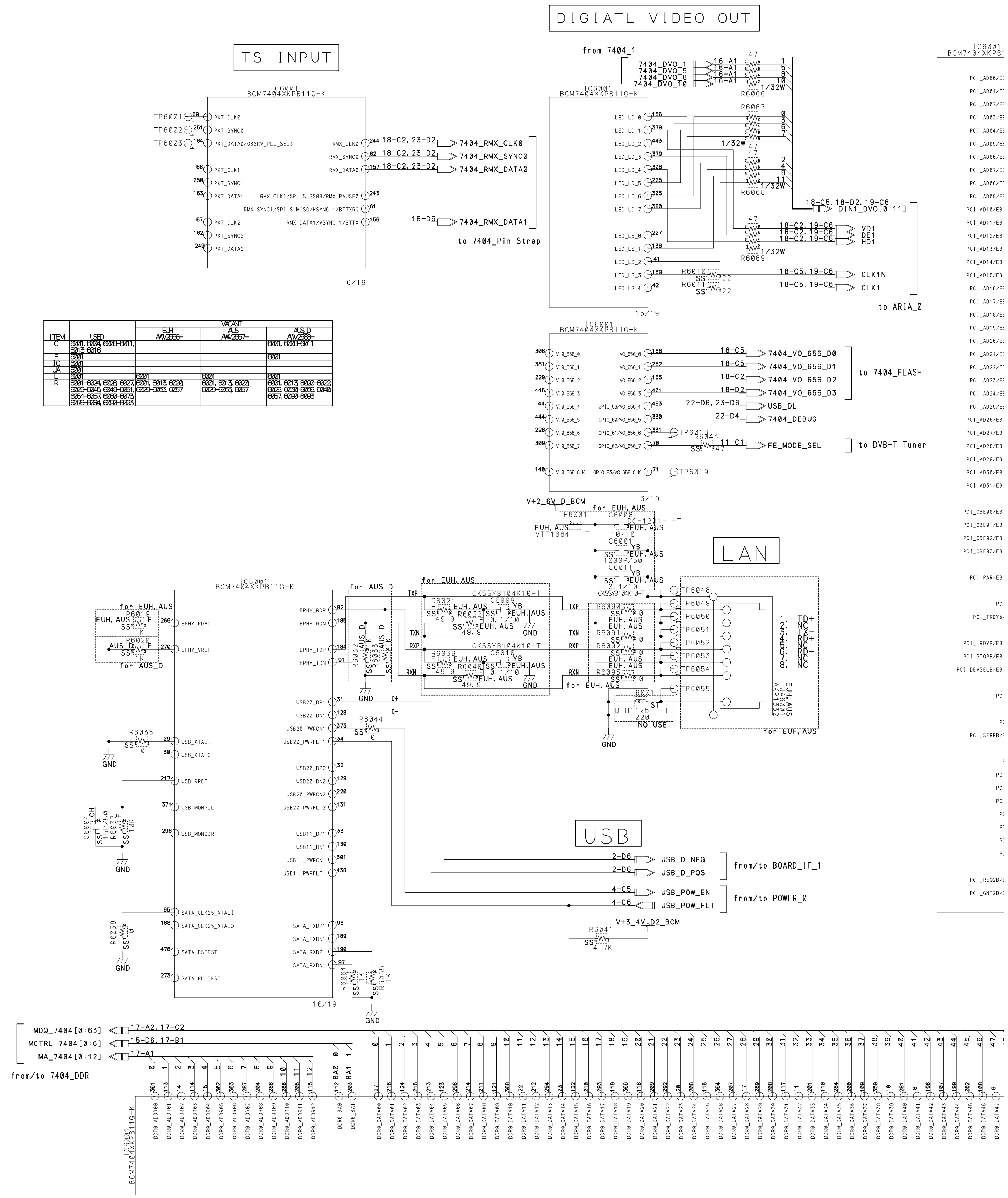

RADD3
RADD2
RADD1
RADD0
EMMA2[0:163]
V+3_4V_ACT_VBI
C5706
C5709
YB
SS
0.1/10
R5703
10K
R5704
330
C5710
C5719
C5711
C5712
IC5701
TC90173FG-K
D2
IOVDD3
D1
D0
DVDD3
ADR3
ADR2
DVSS3
ADR1
ADR0
IOVDD2
CS
WR
RD
DVDD2
TEST2
DVSS2
OSCSO
OSCSI
OSCVDD
TDCLK
INT
DVSS1
RESET
DVDD1
SCAN
TEST1
TEST0
ADBIAS
ADREF2
AVDD1
VIN
AVSS
PIO2
PIO3
IOVDD1
TP5701
TP5702
TP5703
TP5704
49
CS_VBI
R5702
R5706
100
23-D4, 24-D3
FWEB
FOEB
23-D4, 24-D5
from EMMA2
23-D2
27MHZ_VBI
23-A1
RESET_VBI
R5713
4.7K
51
VBI_INT
C5717
C5718
C5720
C5704
CH
68/50
GND
V+2_5V_ACT_VBI
D5701
HSM107S-E-TLB

ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	5701, 5704-5712, 5714-5720			
D	5701			
IC	5701			
L	5701, 5702			
R	5701-5704, 5706, 5709, 5713			

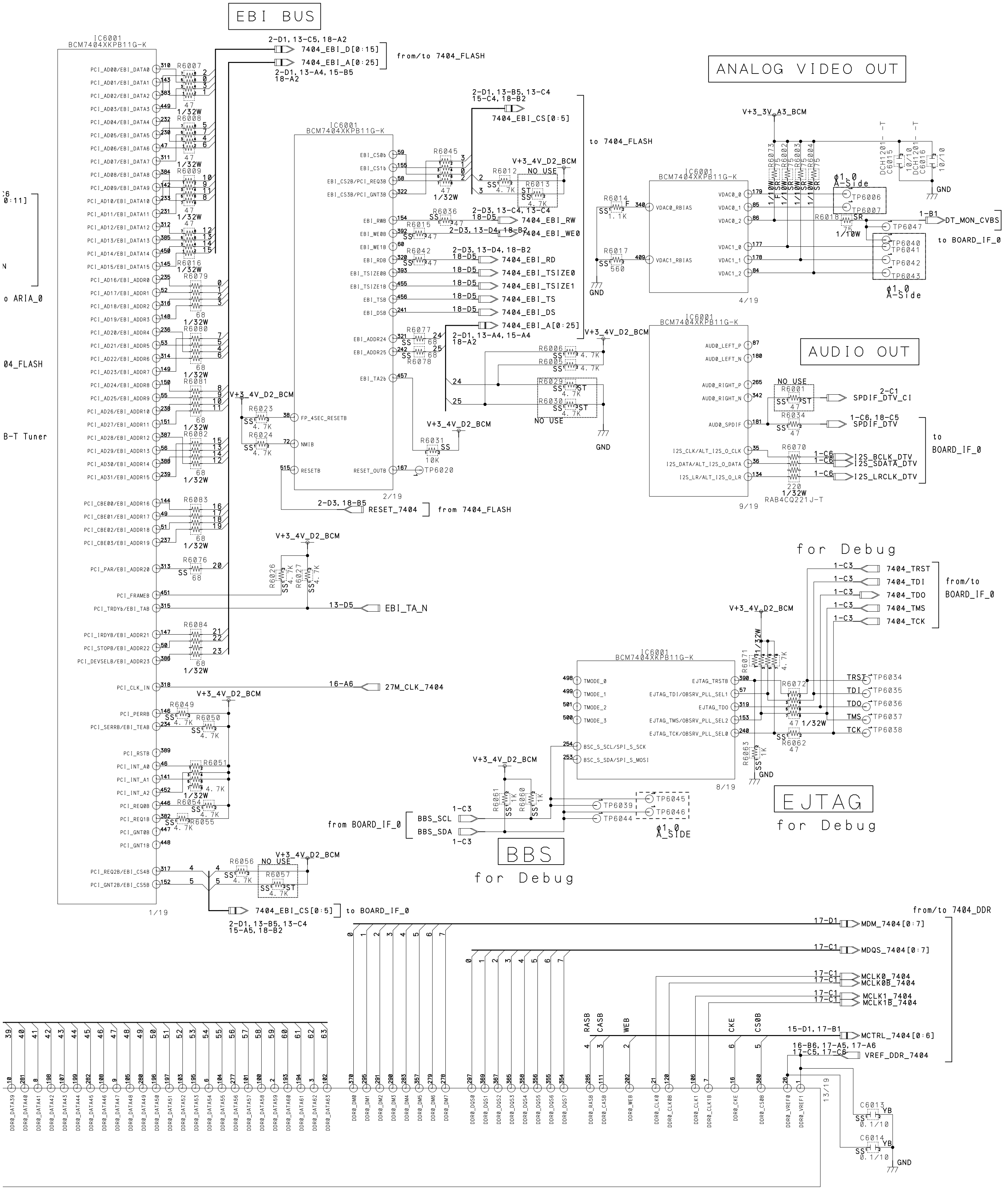
MAIN ASS'Y (EU_HD, AUS) (14/24)
VBI_SLICER BLOCK

AWV2556-
AWV2557-
AWV2588-

7.15 MAIN ASSY (15/24) [7404_0 BLOCK]


A
B
C
D
E
F
DIGIATL VIDEO OUT
TS INPUT
IC6001
BCM7404XKPB11G-K
TP6001
TP6002
TP6003
PKT_CLK0
PKT_SYNC0
PKT_DATA0/OBSRV_PLL_SEL3
PKT_CLK1
PKT_SYNC1
PKT_DATA1
PKT_CLK2
PKT_SYNC2
PKT_DATA2
RMX_CLK0
RMX_SYNC0
RMX_DATA0
RMX_CLK1/SPI_S_SS0B/RMX_PAUSE0
RMX_SYNC1/SPI_S_MISO/HSYNC_1/BTTXRQ
RMX_DATA1/VSYNC_1/BTTX
18-C2, 23-D2
18-D5
7404_RMX_CLK0
7404_RMX_SYNC0
7404_RMX_DATA0
7404_RMX_DATA1
to 7404_Pin Strap
6/19
from 7404_1
7404_DVO_1
7404_DVO_5
7404_DVO_8
7404_DVO_10
16-A1
47
1/32W
R6066
R6067
R6068
R6069
LED_LD_0
LED_LD_1
LED_LD_2
LED_LD_3
LED_LD_4
LED_LD_5
LED_LD_6
LED_LD_7
LED_LS_0
LED_LS_1
LED_LS_2
LED_LS_3
LED_LS_4
18-C5, 18-D2, 19-C6
DIN1_DVO[0:11]
18-C2, 19-C6
VD1
DE1
HD1
R6010
R6011
SS
22
18-C5, 19-C6
CLK1N
CLK1
to ARIA_0
15/19
VI0_656_0
VI0_656_1
VI0_656_2
VI0_656_3
VI0_656_4
VI0_656_5
VI0_656_6
VI0_656_7
VI0_656_CLK
VO_656_0
VO_656_1
VO_656_2
VO_656_3
GPIO_59/VO_656_4
GPIO_60/VO_656_5
GPIO_61/VO_656_6
GPIO_62/VO_656_7
GPIO_63/VO_656_CLK
18-C5
18-D2
7404_VO_656_D0
7404_VO_656_D1
7404_VO_656_D2
7404_VO_656_D3
to 7404_FLASH
22-D6, 23-D6
USB_DL
22-D4
7404_DEBUG
TP6018
R6043
47
11-C1
FE_MODE_SEL
to DVB-T Tuner
TP6019
3/19
V+2_6V_D_BCM
for EUH, AUS
F6001
C6008
DCH1201- -T
EUH, AUS
VTF1084- -T
10/10
C6001
YB
1000P/50
C6011
0.1/10
CKSSYB104K10-T
LAN
for AUS_D
TXP
TXN
RXP
RXN
R6021
C6009
R6022
49.9
0.1/10
GND
R6039
C6010
R6040
R6090
R6091
R6092
R6093
0
R6032
R6033
R6034
R6035
1K
TP6048
TP6049
TP6050
TP6051
TP6052
TP6053
TP6054
TP6055
1. TD+
2. NC
3. TX-
4. RD+
5. NC
6. NC
7. RD-
8. NC
L6001
ST
BTH1125- -T
220
NO USE
JA6001
AKP1332-
for EUH, AUS
R6019
R6020
EPHY_RDAC
EPHY_VREF
EPHY_RDP
EPHY_RDN
EPHY_TDP
EPHY_TDN
USB_XTALI
USB_XTALO
USB_RREF
USB_MONPLL
USB_MONCDR
C6004
CH
15P/50
R6037
10K
USB20_DP1
USB20_DN1
USB20_PWRON1
USB20_PWRFLT1
USB20_DP2
USB20_DN2
USB20_PWRON2
USB20_PWRFLT2
USB11_DP1
USB11_DN1
USB11_PWRON1
USB11_PWRFLT1
D+
D-
R6044
USB
2-D6
USB_D_NEG
USB_D_POS
from/to BOARD_IF_1
4-C5
4-C6
USB_POW_EN
USB_POW_FLT
from/to POWER_0
V+3_4V_D2_BCM
R6041
4.7K
SATA_CLK25_XTALI
SATA_CLK25_XTALO
SATA_FSTEST
SATA_PLLTEST
SATA_TXDP1
SATA_TXDN1
SATA_RXDP1
SATA_RXDN1
R6038
R6064
R6065
16/19
MDQ_7404[0:63]
MCTRL_7404[0:6]
MA_7404[0:12]
17-A2, 17-C2
15-D6, 17-B1
17-A1
from/to 7404_DDR
BA0
BA1
DDR0_ADDR00
DDR0_ADDR12
DDR0_BA0
DDR0_BA1
DDR0_DATA00
DDR0_DATA47
PCI_AD00/EB
PCI_AD31/EB
PCI_CBE00/EB
PCI_CBE03/EB
PCI_PAR/EB
PCI_TRDYb
PCI_IRDYB/EB
PCI_STOPB/EB
PCI_DEVSELB/EB
PCI_SERRB
PCI_REQ2B
PCI_GNT2B

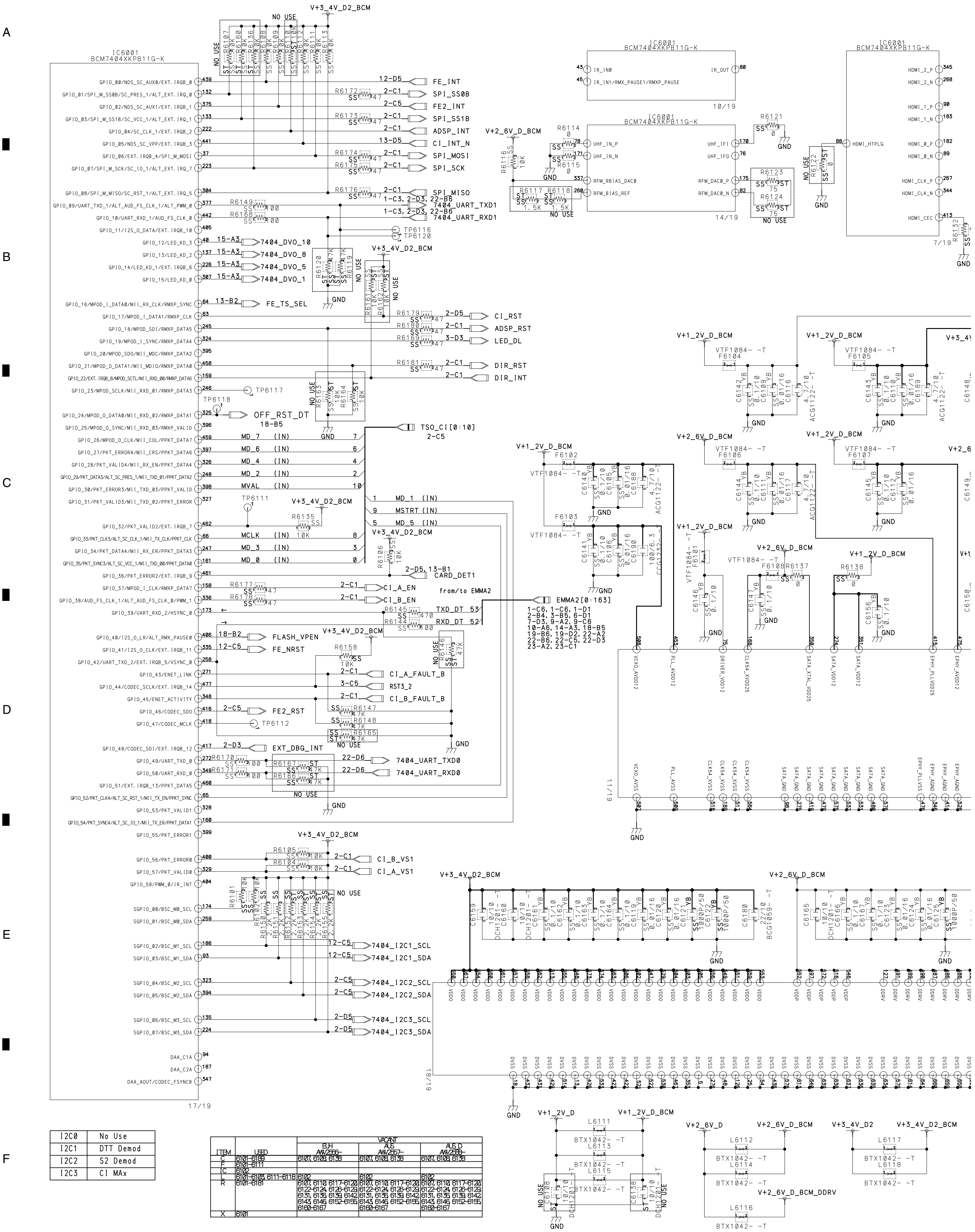
ITEM	USED	VACANT		
		EUH AW2556–	AUS AW2557–	AUS_D AW2588–
C	6001, 6004, 6008–6011, 6013–6016			6001, 6008–6011
F	6001			6001
IC	6001			
JA	6001			
L	6001	6001	6001	6001
R	6001–6024, 6026, 6027, 6029–6045, 6049–6051, 6054–6057, 6060–6073, 6076–6084, 6090–6093	6001, 6013, 6020, 6029–6033, 6057	6001, 6013, 6020, 6029–6033, 6057	6001, 6013, 6020–6022, 6029, 6030, 6039, 6040, 6057, 6090–6093


EBI BUS
IC6001
BCM7404XKPB11G-K
2-D1, 13-C5, 18-A2
7404_EBI_D[0:15]
7404_EBI_A[0:25]
2-D1, 13-A4, 15-B5
18-A2
from/to 7404_FLASH
to 7404_FLASH
7404_EBI_CS[0:5]
ANALOG VIDEO OUT
V+3_3V_A3_BCM
V+3_4V_D2_BCM
NO USE
7404_EBI_RW
7404_EBI_WE0
7404_EBI_RD
7404_EBI_TSIZE0
7404_EBI_TSIZE1
7404_EBI_TS
7404_EBI_DS
7404_EBI_A[0:25]
TP6006
TP6007
TP6040
TP6041
TP6042
TP6043
TP6047
DT_MON_CVBS
to BOARD_IF_0
ϕ1.0
A-Side
AUDIO OUT
SPDIF_DTV_CI
SPDIF_DTV
I2S_BCLK_DTV
I2S_SDATA_DTV
I2S_LRCLK_DTV
RAB4CQ221J-T
RESET_7404
from 7404_FLASH
TP6020
for Debug
7404_TRST
7404_TDI
7404_TDO
7404_TMS
7404_TCK
from/to
BOARD_IF_0
EBI_TA_N
27M_CLK_7404
TP6034
TP6035
TP6036
TP6037
TP6038
TP6039
TP6044
TP6045
TP6046
EJTAG
for Debug
from BOARD_IF_0
BBS_SCL
BBS_SDA
BBS
for Debug
7404_EBI_CS[0:5]
to BOARD_IF_0
2-D1, 13-B5, 13-C4
15-A5, 18-B2
from/to 7404_DDR
MDM_7404[0:7]
MDQS_7404[0:7]
MCLK0_7404
MCLK0B_7404
MCLK1_7404
MCLK1B_7404
MCTRL_7404[0:6]
VREF_DDR_7404
C6013
C6014
GND
B-T Tuner
04_FLASH
o ARIA_0
1/19
2/19
4/19
8/19
9/19
13/19

MAIN ASS'Y (EU_HD,AUS) (15/24)
7404_0 BLOCK

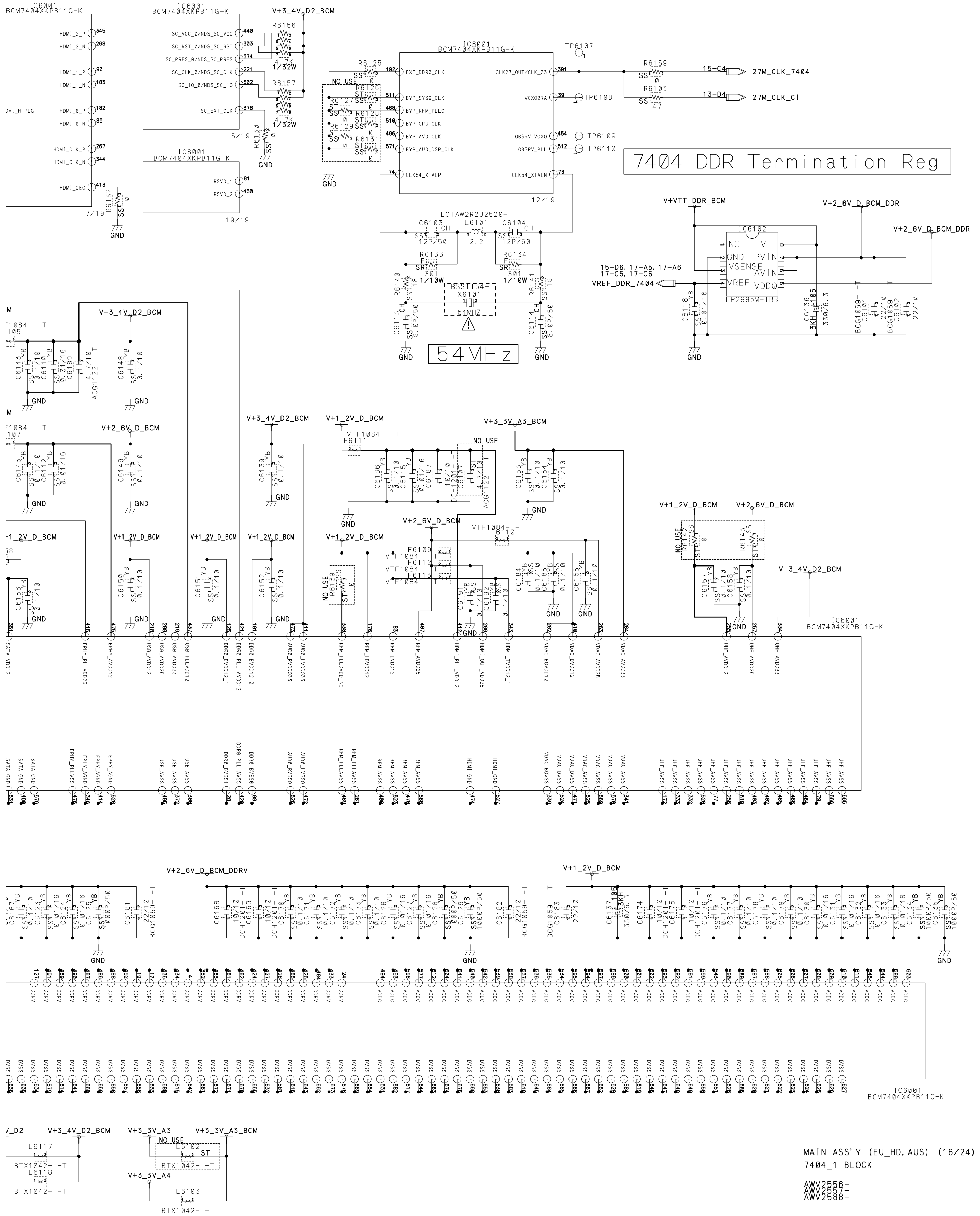
AWV2556-
AWV2557-
AWV2588-

7.16 MAIN ASSY (16/24) [7404_1 BLOCK]


A
B
C
D
E
F
IC6001
BCM7404XKPB11G-K
V+3_4V_D2_BCM
NO USE
FE_INT
SPI_SS0B
FE2_INT
SPI_SS1B
ADSP_INT
CI_INT_N
SPI_MOSI
SPI_SCK
SPI_MISO
7404_UART_TXD1
7404_UART_RXD1
TP6116
TP6120
7404_DVO_10
7404_DVO_8
7404_DVO_5
7404_DVO_1
FE_TS_SEL
CI_RST
ADSP_RST
LED_DL
DIR_RST
DIR_INT
TP6117
TP6118
OFF_RST_DT
TSO_CI[0:10]
MD_7 (IN)
MD_6 (IN)
MD_4 (IN)
MD_2 (IN)
MVAL (IN)
MD_1 (IN)
MSTRT (IN)
MD_5 (IN)
MCLK (IN)
MD_3 (IN)
MD_0 (IN)
TP6111
CARD_DET1
CI_A_EN
CI_B_EN
from/to EMMA2
EMMA2[0:163]
TXD_DT
RXD_DT
FLASH_VPEN
FE_NRST
CI_A_FAULT_B
RST3_2
CI_B_FAULT_B
FE2_RST
TP6112
EXT_DBG_INT
7404_UART_TXD0
7404_UART_RXD0
CI_B_VS1
CI_A_VS1
7404_I2C1_SCL
7404_I2C1_SDA
7404_I2C2_SCL
7404_I2C2_SDA
7404_I2C3_SCL
7404_I2C3_SDA
GND
IR_IN0
IR_IN1/RMX_PAUSE1/RMXP_PAUSE
IR_OUT
10/19
V+2_6V_D_BCM
UHF_IN_P
UHF_IN_N
RFM_RBIAS_DAC0
RFM_BIAS_REF
UHF_IF1
UHF_IF0
RFM_DAC0_P
RFM_DAC0_N
14/19
HDMI_HTPLG
HDMI_2_P
HDMI_2_N
HDMI_1_P
HDMI_1_N
HDMI_0_P
HDMI_0_N
HDMI_CLK_P
HDMI_CLK_N
HDMI_CEC
7/19
V+1_2V_D_BCM
VTF1084- -T
VCXO_AVDD12
PLL_AVDD12
DRIVER_VDD12
CLK54_XVDD25
SATA_XTAL_VDD25
SATA_VDD12
EPHY_PLLVDD25
EPHY_AVDD12
11/19
VDDO
VDDP
DDRV
DVSS
18/19
17/19
V+1_2V_D
V+2_6V_D
V+3_4V_D2
V+2_6V_D_BCM_DDRV
BTX1042- -T

I2C0	No Use
I2C1	DTT Demod
I2C2	S2 Demod
I2C3	CI MAx

ITEM	USED	VACANT		
		EUH AW2556–	AUS AW2557–	AUS D AW2588–
C	6101–6189	6107, 6108, 6138	6107, 6108, 6138	6107, 6108, 6138
F	6101–6111			
IC	6102			
L	6101–6103, 6111–6118	6102	6102	6102
R	6101–6181	6107, 6110, 6117–6120, 6122–6124, 6126–6129, 6131, 6136, 6139, 6142, 6143, 6146, 6152–6155, 6160–6167	6107, 6110, 6117–6120, 6122–6124, 6126–6129, 6131, 6136, 6139, 6142, 6143, 6146, 6152–6155, 6160–6167	6107, 6110, 6117–6120, 6122–6124, 6126–6129, 6131, 6136, 6139, 6142, 6143, 6146, 6152–6155, 6160–6167
X	6101			


IC6001
BCM7404XKPB11G-K
HDMI_2_P 345
HDMI_2_N 268
HDMI_1_P 90
HDMI_1_N 183
HDMI_HTPLG
HDMI_0_P 182
HDMI_0_N 89
HDMI_CLK_P 267
HDMI_CLK_N 344
HDMI_CEC 413
R6132 SS 0
7/19
GND
SC_VCC_0/NDS_SC_VCC 440
SC_RST_0/NDS_SC_RST 303
SC_PRES_0/NDS_SC_PRES 374
SC_CLK_0/NDS_SC_CLK 221
SC_IO_0/NDS_SC_IO 302
SC_EXT_CLK 376
5/19
V+3_4V_D2_BCM
R6156 4.7K 1/32W
R6157 4.7K 1/32W
R6130 SS 0
RSVD_1 81
RSVD_2 430
19/19
R6125 SS 0
NO USE
R6126 ST SS 0
R6127 ST SS 0
R6128 ST SS 0
R6129 ST SS 0
R6131 ST SS 0
EXT_DDR0_CLK 192
BYP_SYS9_CLK 511
BYP_RFM_PLLO 468
BYP_CPU_CLK 510
BYP_AVD_CLK 496
BYP_AUD_DSP_CLK 571
CLK54_XTALP 74
CLK27_OUT/CLK_33 391
VCXO27A 39
OBSRV_VCXO 454
OBSRV_PLL 512
CLK54_XTALN 73
12/19
TP6107
TP6108
TP6109
TP6110
R6159 SS 0
R6103 SS 47
15-C4
13-D4
27M_CLK_7404
27M_CLK_CI
7404 DDR Termination Reg
LCTAW2R2J2520-T
C6103 CH SS 12P/50
L6101 2.2
C6104 CH SS 12P/50
R6133 F SR 301 1/10W
R6134 F SR 301 1/10W
R6140 SS 18
R6141 SS 18
BSS1134-
X6101
54MHZ
C6113 CH SS 8.0P/50
C6114 CH SS 8.0P/50
54MHz
V+VTT_DDR_BCM
V+2_6V_D_BCM_DDR
IC6102
NC VTT
GND PVIN
VSENSE AVIN
VREF VDDQ
LP2995M-TBB
15-D6, 17-A5, 17-A6
17-C5, 17-C6
VREF_DDR_7404
C6118 YB SS 0.01/16
C6136 3KH 105 330/6.3
BCG1059- -T C6101 22/10
BCG1059- -T C6102 22/10
V+3_4V_D2_BCM
V+2_6V_D_BCM
V+1_2V_D_BCM
V+3_3V_A3_BCM
VTF1084- -T
F6111
F6109
F6110
F6112
F6113
NO USE
R6139 ST SS 0
R6142 ST SS 0
R6143 ST SS 0
V+3_4V_D2_BCM
SATA_VDD12 EPHY_PLLVDD25 EPHY_AVDD12 USB_AVDD12 USB_AVDD35 USB_PLLVDD12 DDR0_BVDD12_1 DDR0_PLL_AVDD12 DDR0_BVDD12_0 AUD0_AVDD035 AUD0_LVDD33 RFM_PLLVDD_NC RFM_LDVDD12 RFM_AVDD12 RFM_AVDD25 HDMI_PLL_VDD12 HDMI_OUT_VDD25 HDMI_TVDD12_1 VDAC_BGVDD33 VDAC_DVDD12 VDAC_AVDD25 VDAC_AVDD33 UHF_AVDD12 UHF_AVDD25 UHF_AVDD35
SATA_GND EPHY_PLLVSS EPHY_AGND USB_AVSS DDR0_BVSS1 DDR0_PLL_AVSS DDR0_BVSS0 AUD0_AVSS0 AUD0_LVSS0 RFM_PLLAVSS RFM_AVSS HDMI_GND VDAC_BGVSS VDAC_DVSS VDAC_AVSS UHF_AVSS
V+2_6V_D_BCM_DDRV
V+1_2V_D_BCM
DDRV
VDDC
DVSS
IC6001
BCM7404XKPB11G-K
V+3_4V_D2_BCM
V+3_3V_A3
V+3_3V_A3_BCM
V+3_3V_A4
L6117 BTX1042- -T
L6118 BTX1042- -T
NO USE
L6102 ST BTX1042- -T
L6103 BTX1042- -T
GND

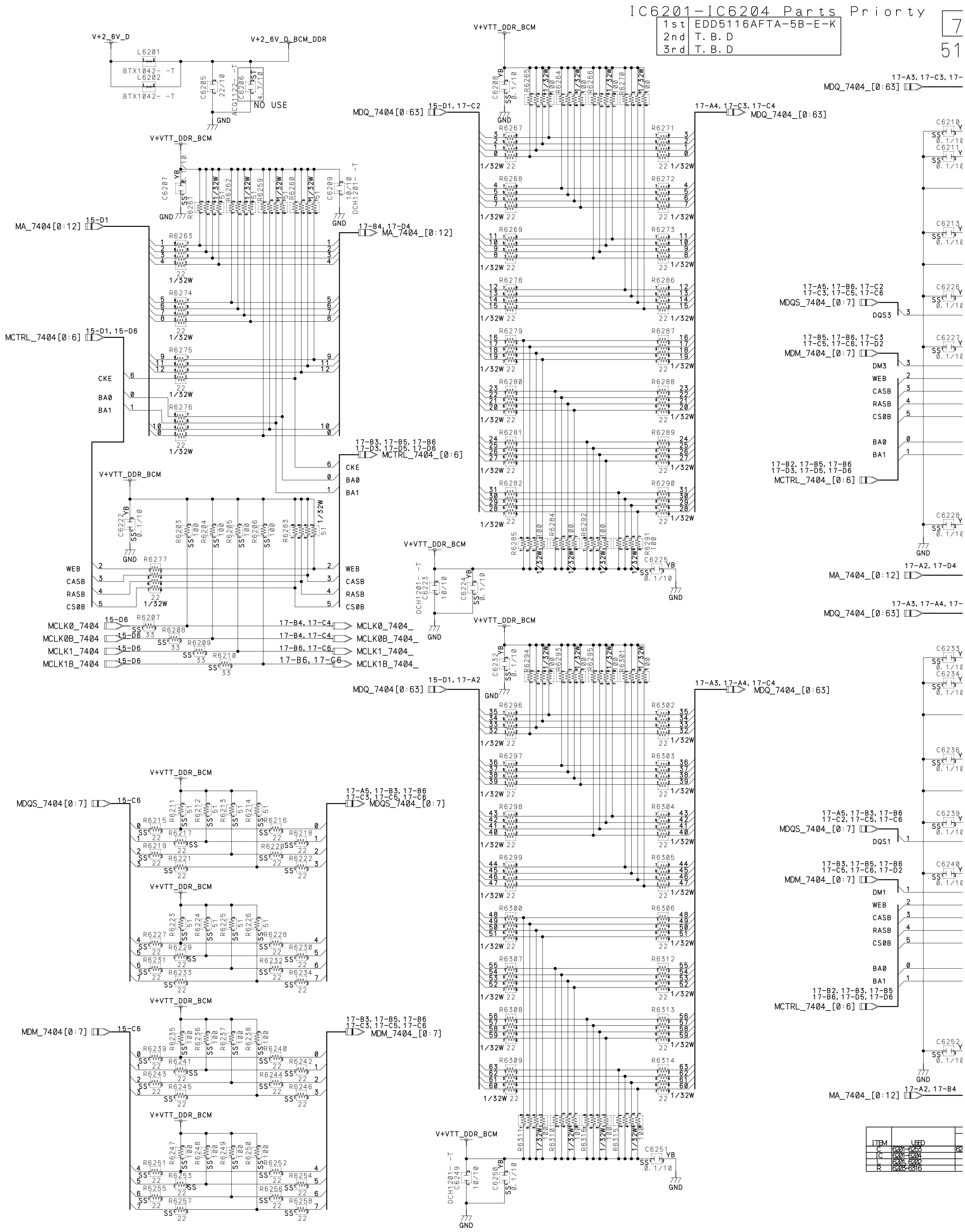
MAIN ASS'Y (EU_HD,AUS) (16/24)
7404_1 BLOCK

AWV2556-
AWV2557-
AWV2588-

7.17 MAIN ASSY (17/24) [7404_DDR BLOCK]

IC6201-IC6204 Parts Priorty

1st	EDD5116AFTA-5B-E-K
2nd	T. B. D
3rd	T. B. D

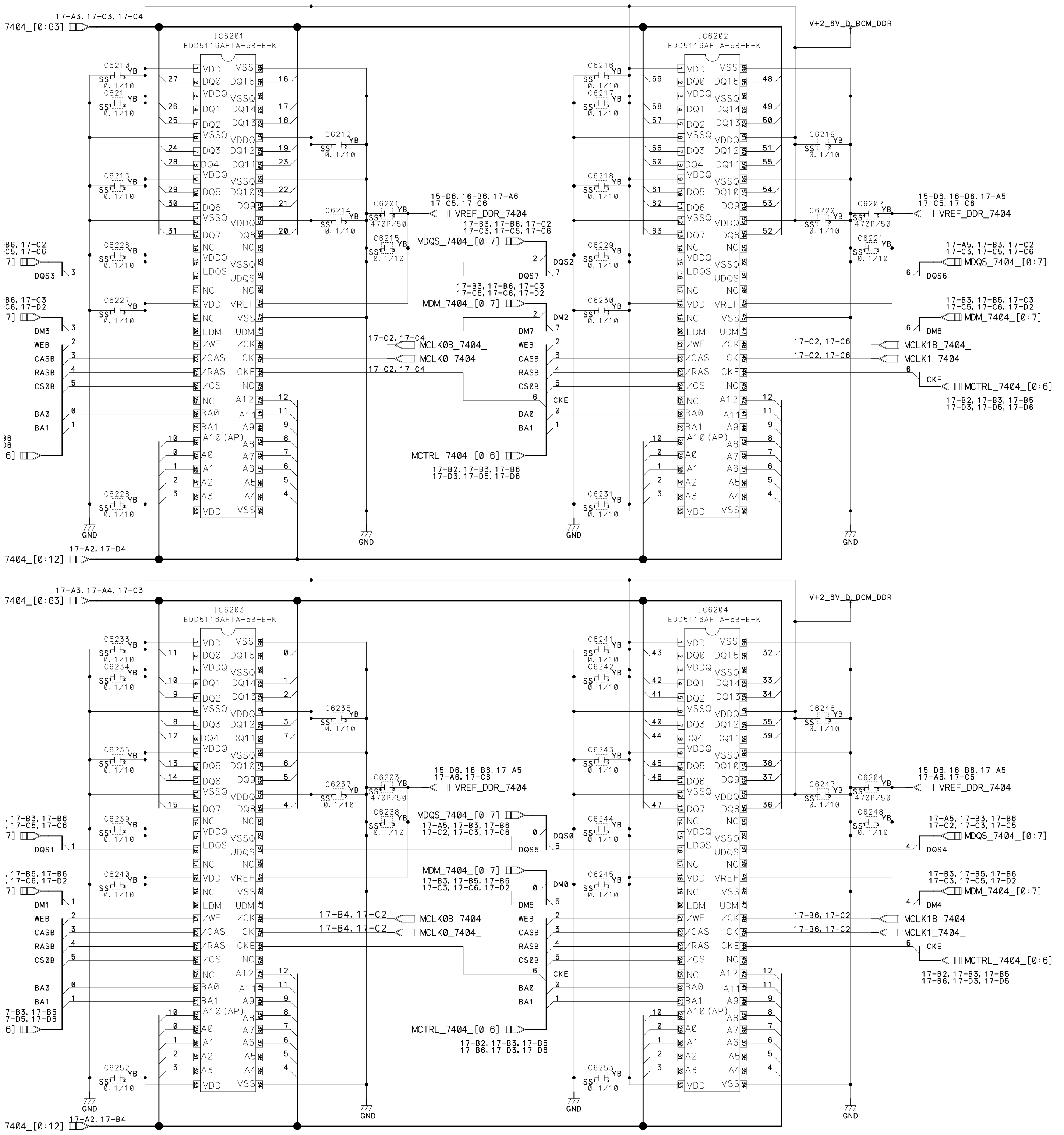


A
B
C
D
E
F
V+2_6V_D
L6201
BTX1042- -T
L6202
BTX1042- -T
V+2_6V_D_BCM_DDR
C6205 22/10
C6206 ACG1122- -T 4.7/10
NO USE
GND
V+VTT_DDR_BCM
C6207 YB SS 0.1/10
C6209 10/10 DCH1201- -T
MA_7404[0:12]
15-D1
17-B4, 17-D4
MA_7404_[0:12]
R6263
R6274
R6275
R6276
R6261
R6262
R6259
R6260
1/32W
22
51
MCTRL_7404[0:6]
15-D1, 15-D6
CKE
BA0
BA1
17-B3, 17-B5, 17-B6
17-D3, 17-D5, 17-D6
MCTRL_7404_[0:6]
C6222 YB SS 0.1/10
R6203 R6204 R6205 R6206 100
R6283
R6277
WEB
CASB
RASB
CS0B
MCLK0_7404
MCLK0B_7404
MCLK1_7404
MCLK1B_7404
15-D6
R6207 R6208 R6209 R6210 33
17-B4, 17-C4
17-B6, 17-C6
MCLK0_7404_
MCLK0B_7404_
MCLK1_7404_
MCLK1B_7404_
MDQS_7404[0:7]
15-C6
R6211 R6212 R6213 R6214
R6215 R6216 R6217 R6218 R6219 R6220 R6221 R6222
17-A5, 17-B3, 17-B6
17-C3, 17-C5, 17-C6
MDQS_7404_[0:7]
R6223 R6224 R6225 R6226
R6227 R6228 R6229 R6230 R6231 R6232 R6233 R6234
MDM_7404[0:7]
R6235 R6236 R6237 R6238
R6239 R6240 R6241 R6242 R6243 R6244 R6245 R6246
17-B3, 17-B5, 17-B6
17-C3, 17-C5, 17-C6
MDM_7404_[0:7]
R6247 R6248 R6249 R6250
R6251 R6252 R6253 R6254 R6255 R6256 R6257 R6258
MDQ_7404[0:63]
15-D1, 17-C2
17-A4, 17-C3, 17-C4
MDQ_7404_[0:63]
C6208 YB SS 0.1/10
R6265 R6264 R6266 R6270
R6267 R6268 R6269 R6278 R6279 R6280 R6281 R6282
R6271 R6272 R6273 R6286 R6287 R6288 R6289 R6290
R6285 R6284 R6292 R6291
C6225 YB SS 0.1/10
C6223 DCH1201- -T 10/10
C6224 YB SS 0.1/10
15-D1, 17-A2
17-A3, 17-A4, 17-C4
C6232 YB SS 0.1/10
R6294 R6293 R6295 R6301
R6296 R6297 R6298 R6299 R6300 R6307 R6308 R6309
R6302 R6303 R6304 R6305 R6306 R6312 R6313 R6314
R6311 R6310 R6316 R6315
C6251 YB SS 0.1/10
C6249 DCH1201- -T 10/10
C6250 YB SS 0.1/10
17-A3, 17-C3, 17-
MDQ_7404_[0:63]
C6210 C6211 C6213 C6226 C6227 C6228
17-A5, 17-B6, 17-C2
17-C3, 17-C5, 17-C6
MDQS_7404_[0:7]
DQS3
17-B5, 17-B6, 17-C3
17-C5, 17-C6, 17-D2
MDM_7404_[0:7]
DM3
17-B2, 17-B5, 17-B6
17-D3, 17-D5, 17-D6
MCTRL_7404_[0:6]
17-A2, 17-D4
MA_7404_[0:12]
17-A3, 17-A4, 17-
C6233 C6234 C6236 C6239 C6240 C6252
17-A5, 17-B3, 17-B6
17-C2, 17-C5, 17-C6
DQS1
17-B3, 17-B5, 17-B6
17-C5, 17-C6, 17-D2
DM1
17-B2, 17-B3, 17-B5
17-B6, 17-D5, 17-D6
17-A2, 17-B4
ITEM USED
C
R
7
51

Priorty

7404 DDR

512Mbit x 4pcs

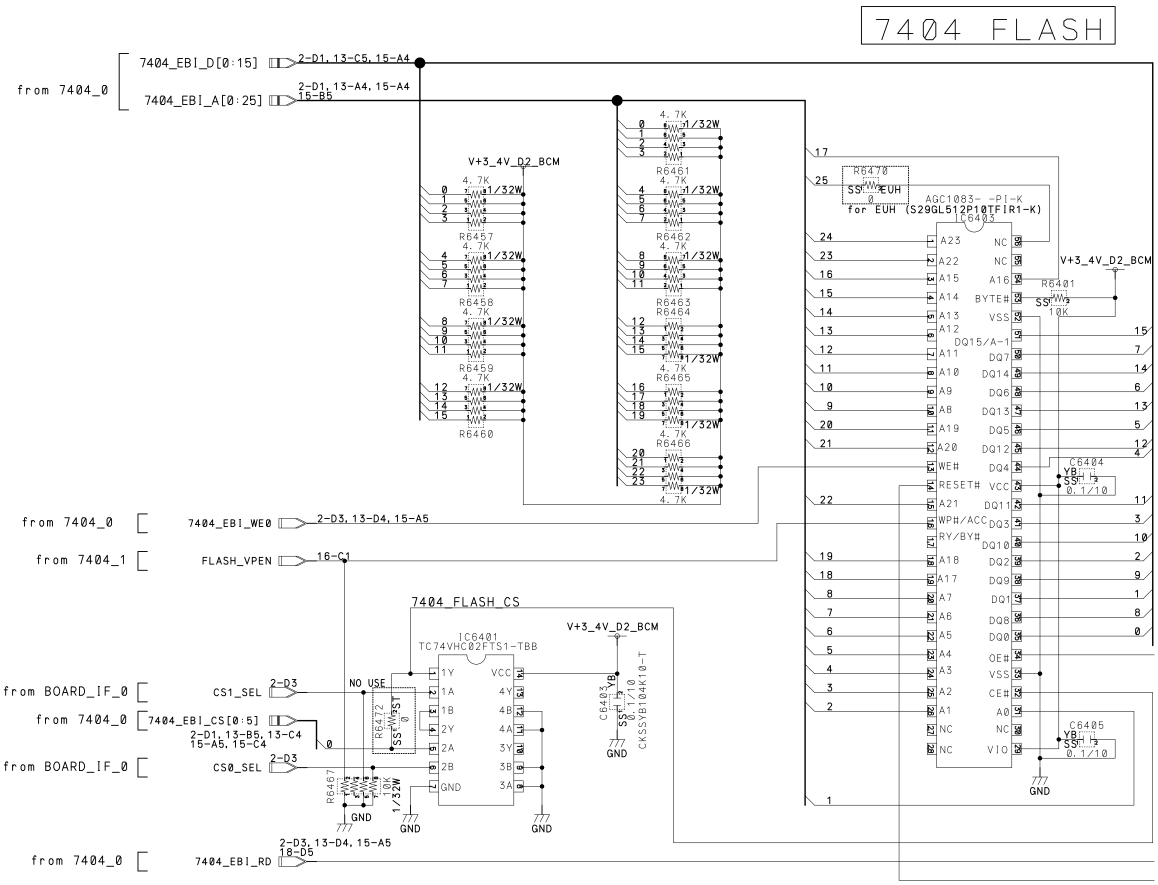

IC6201
EDD5116AFTA-5B-E-K
IC6202
EDD5116AFTA-5B-E-K
IC6203
EDD5116AFTA-5B-E-K
IC6204
EDD5116AFTA-5B-E-K
V+2_6V_D_BCM_DDR
7404_[0:63]
7404_[0:12]
17-A3, 17-C3, 17-C4
17-A2, 17-D4
17-A3, 17-A4, 17-C3
17-A2, 17-B4
VREF_DDR_7404
MDQS_7404_[0:7]
MDM_7404_[0:7]
MCLK0B_7404_
MCLK0_7404_
MCLK1B_7404_
MCLK1_7404_
MCTRL_7404_[0:6]
DQS0
DQS1
DQS2
DQS3
DQS4
DQS5
DQS6
DQS7
DM0
DM1
DM2
DM3
DM4
DM5
DM6
DM7
WEB
CASB
RASB
CS0B
CKE
BA0
BA1
GND
VDD
VSS
VDDQ
VSSQ
LDQS
UDQS
LDM
UDM
VREF
/WE
/CAS
/RAS
/CS
/CK
CK
NC
A10 (AP)
0.1/10
470P/50
SS
YB

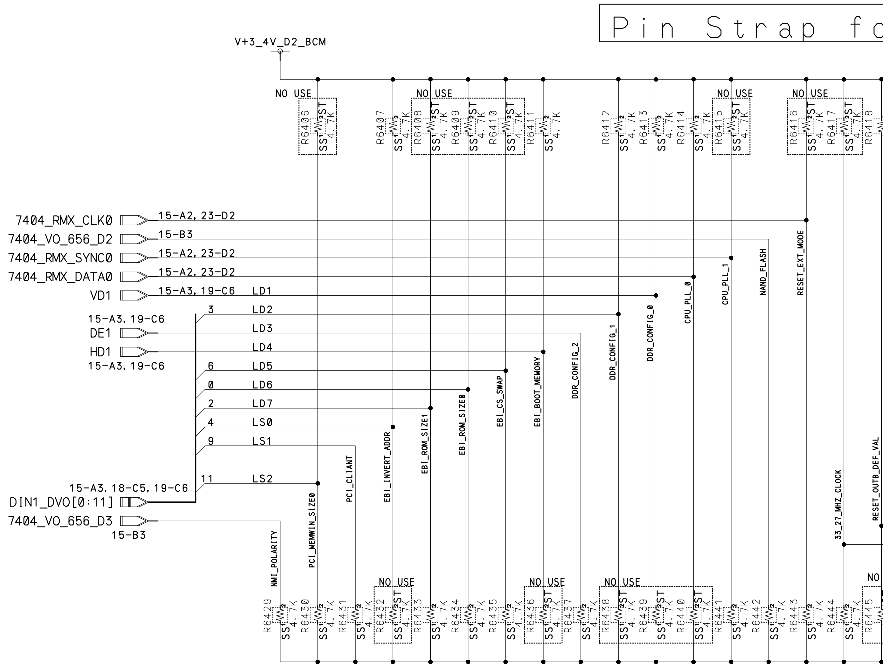
ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	6201-6253	6206	6206	6206
IC	6201-6204			
L	6201, 6202			
R	6203-6316			

MAIN ASS'Y (EU_HD, AUS) (017/24)
7404_DDR BLOCK

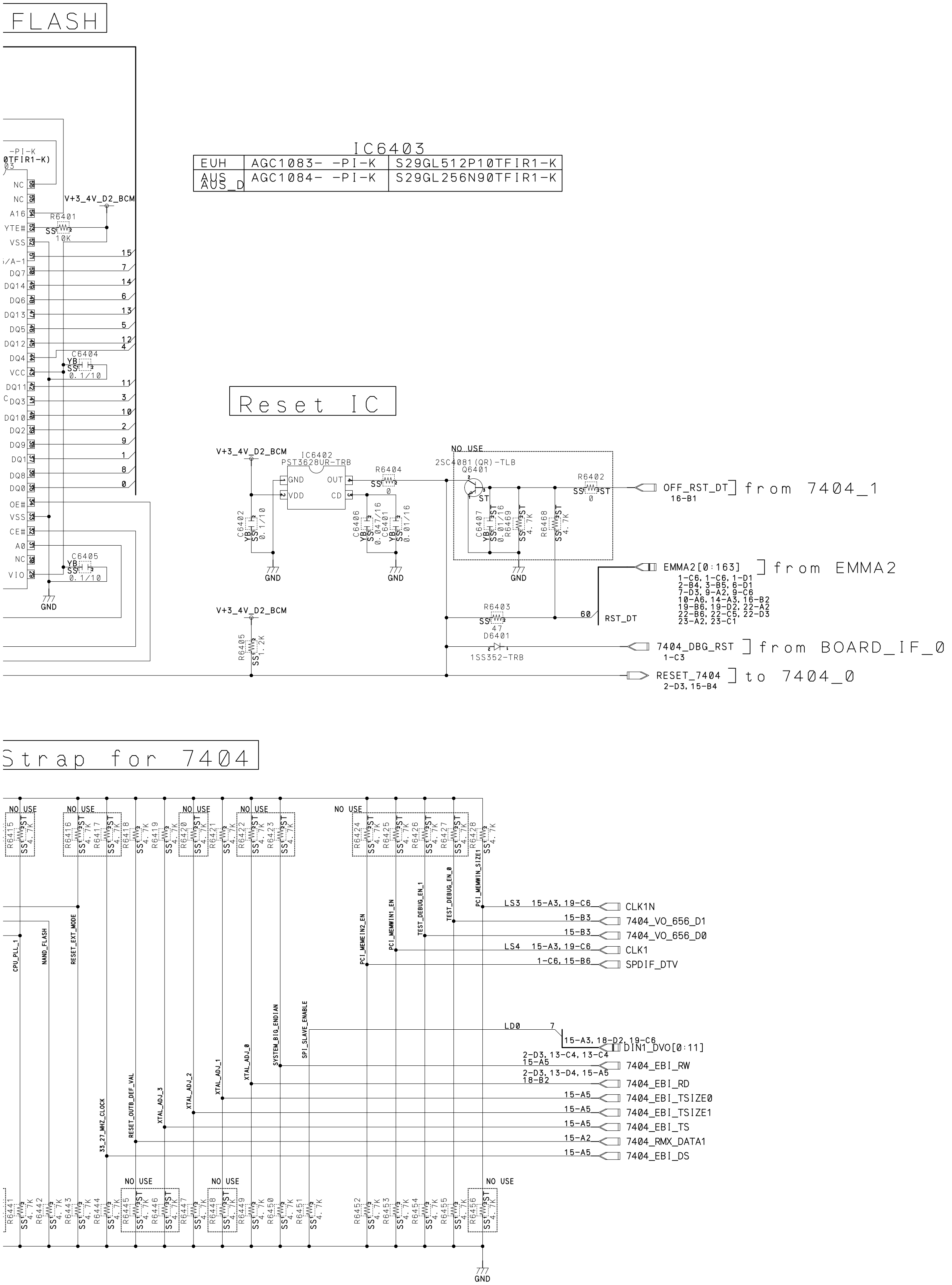
AWV2556-
AWV2557-
AWV2588-

7.18 MAIN ASSY (18/24) [7404_FLASH BLOCK]


7404 FLASH
from 7404_0
7404_EBI_D[0:15]
2-D1, 13-C5, 15-A4
7404_EBI_A[0:25]
2-D1, 13-A4, 15-A4
15-B5
V+3_4V_D2_BCM
4.7K
1/32W
R6457
R6458
R6459
R6460
R6461
R6462
R6463
R6464
R6465
R6466
R6470
SS EUH
0
AGC1083- -PI-K
for EUH (S29GL512P10TFIR1-K)
IC6403
A23
A22
A15
A14
A13
A12
A11
A10
A9
A8
A19
A20
WE#
RESET#
A21
WP#/ACC
RY/BY#
A18
A17
A7
A6
A5
A4
A3
A2
A1
NC
NC
NC
NC
A16
BYTE#
VSS
DQ15/A-1
DQ7
DQ14
DQ6
DQ13
DQ5
DQ12
DQ4
VCC
DQ11
DQ3
DQ10
DQ2
DQ9
DQ1
DQ8
DQ0
OE#
VSS
CE#
A0
NC
VIO
R6401
SS
10K
C6404
YB
SS
0.1/10
C6405
YB
SS
0.1/10
GND
from 7404_0
7404_EBI_WE0
2-D3, 13-D4, 15-A5
from 7404_1
FLASH_VPEN
16-C1
7404_FLASH_CS
IC6401
TC74VHC02FTS1-TBB
1Y
1A
1B
2Y
2A
2B
GND
VCC
4Y
4B
4A
3Y
3B
3A
V+3_4V_D2_BCM
C6403
YB
SS
0.1/10
CKSSYB104K10-T
GND
from BOARD_IF_0
CS1_SEL
2-D3
NO USE
R6472
SS ST
0
from 7404_0
7404_EBI_CS[0:5]
2-D1, 13-B5, 13-C4
15-A5, 15-C4
0
from BOARD_IF_0
CS0_SEL
2-D3
R6467
10K
1/32W
GND
GND
GND
2-D3, 13-D4, 15-A5
18-D5
from 7404_0
7404_EBI_RD


Pin Strap fc
V+3_4V_D2_BCM
NO USE
R6406
R6407
R6408
R6409
R6410
R6411
R6412
R6413
R6414
R6415
R6416
R6417
R6418
SS ST
4.7K
7404_RMX_CLK0
15-A2, 23-D2
7404_VO_656_D2
15-B3
7404_RMX_SYNC0
15-A2, 23-D2
7404_RMX_DATA0
15-A2, 23-D2
VD1
15-A3, 19-C6
LD1
LD2
LD3
LD4
LD5
LD6
LD7
LS0
LS1
LS2
15-A3, 19-C6
DE1
HD1
15-A3, 19-C6
15-A3, 18-C5, 19-C6
DIN1_DVO[0:11]
7404_VO_656_D3
15-B3
RESET_EXT_MODE
NAND_FLASH
CPU_PLL_1
CPU_PLL_0
DDR_CONFIG_0
DDR_CONFIG_1
DDR_CONFIG_2
EBI_BOOT_MEMORY
EBI_CS_SWAP
EBI_ROM_SIZE0
EBI_ROM_SIZE1
EBI_INVERT_ADDR
PCI_CLIANT
PCI_MEMWIN_SIZE0
NMI_POLARITY
33_27_MHZ_CLOCK
RESET_OUTB_DEF_VAL
R6429
R6430
R6431
R6432
R6433
R6434
R6435
R6436
R6437
R6438
R6439
R6440
R6441
R6442
R6443
R6444
R6445

ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	6401-6407	6407	6407	6407
D	6401			
IC	6401-6403			
Q	6401	6401	6401	6401
R	6401-6470, 6472	6402, 6406, 6408-6410, 6415-6417, 6420, 6422-6427, 6432, 6436, 6438-6440, 6445, 6446, 6448, 6456, 6468, 6469, 6472	6402, 6406, 6408-6410, 6415-6417, 6420, 6422-6427, 6432, 6436, 6438-6440, 6445, 6446, 6448, 6456, 6468-6470, 6472	6402, 6406, 6408-6410, 6415-6417, 6420, 6422-6427, 6432, 6436, 6438-6440, 6445, 6446, 6448, 6456, 6468-6470, 6472



FLASH
-PI-K
0TFIR1-K)
NC
NC
A16
YTE#
VSS
DQ7
DQ14
DQ6
DQ13
DQ5
DQ12
DQ4
VCC
DQ11
DQ3
DQ10
DQ2
DQ9
DQ1
DQ8
DQ0
OE#
VSS
CE#
A0
NC
VIO
V+3_4V_D2_BCM
R6401
10K
C6404
0.1/10
C6405
0.1/10
GND
Reset IC
IC6402
PST3628UR-TRB
GND
VDD
OUT
CD
R6404
0
C6402
0.1/10
C6406
0.047/16
C6401
0.01/16
NO USE
2SC4081(QR)-TLB
Q6401
C6407
0.01/16
R6469
4.7K
R6468
4.7K
R6402
0
OFF_RST_DT
16-B1
from 7404_1
EMMA2[0:163]
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 6-D1
7-D3, 9-A2, 9-C6
10-A6, 14-A3, 16-B2
19-B6, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
from EMMA2
R6403
47
60
RST_DT
D6401
1SS352-TRB
7404_DBG_RST
1-C3
from BOARD_IF_0
R6405
1.2K
RESET_7404
2-D3, 15-B4
to 7404_0
Strap for 7404
NO USE
R6415
R6416
R6417
R6418
R6419
R6420
R6421
R6422
R6423
R6424
R6425
R6426
R6427
R6428
4.7K
CPU_PLL_1
NAND_FLASH
RESET_EXT_MODE
PCI_MEMEIN2_EN
PCI_MEMWIN1_EN
TEST_DEBUG_EN_1
TEST_DEBUG_EN_0
PCI_MEMWIN_SIZE1
LS3 15-A3, 19-C6 CLK1N
15-B3 7404_VO_656_D1
15-B3 7404_VO_656_D0
LS4 15-A3, 19-C6 CLK1
1-C6, 15-B6 SPDIF_DTV
33_27_MHZ_CLOCK
RESET_OUTB_DEF_VAL
XTAL_ADJ_3
XTAL_ADJ_2
XTAL_ADJ_1
XTAL_ADJ_0
SYSTEM_BIG_ENDIAN
SPI_SLAVE_ENABLE
LD0 7
15-A3, 18-D2, 19-C6
DIN1_DVO[0:11]
2-D3, 13-C4, 13-C4
15-A5
7404_EBI_RW
2-D3, 13-D4, 15-A5
18-B2
7404_EBI_RD
15-A5 7404_EBI_TSIZE0
15-A5 7404_EBI_TSIZE1
15-A5 7404_EBI_TS
15-A2 7404_RMX_DATA1
15-A5 7404_EBI_DS
R6441
R6442
R6443
R6444
R6445
R6446
R6447
R6448
R6449
R6450
R6451
R6452
R6453
R6454
R6455
R6456
R6457
GND

IC6403

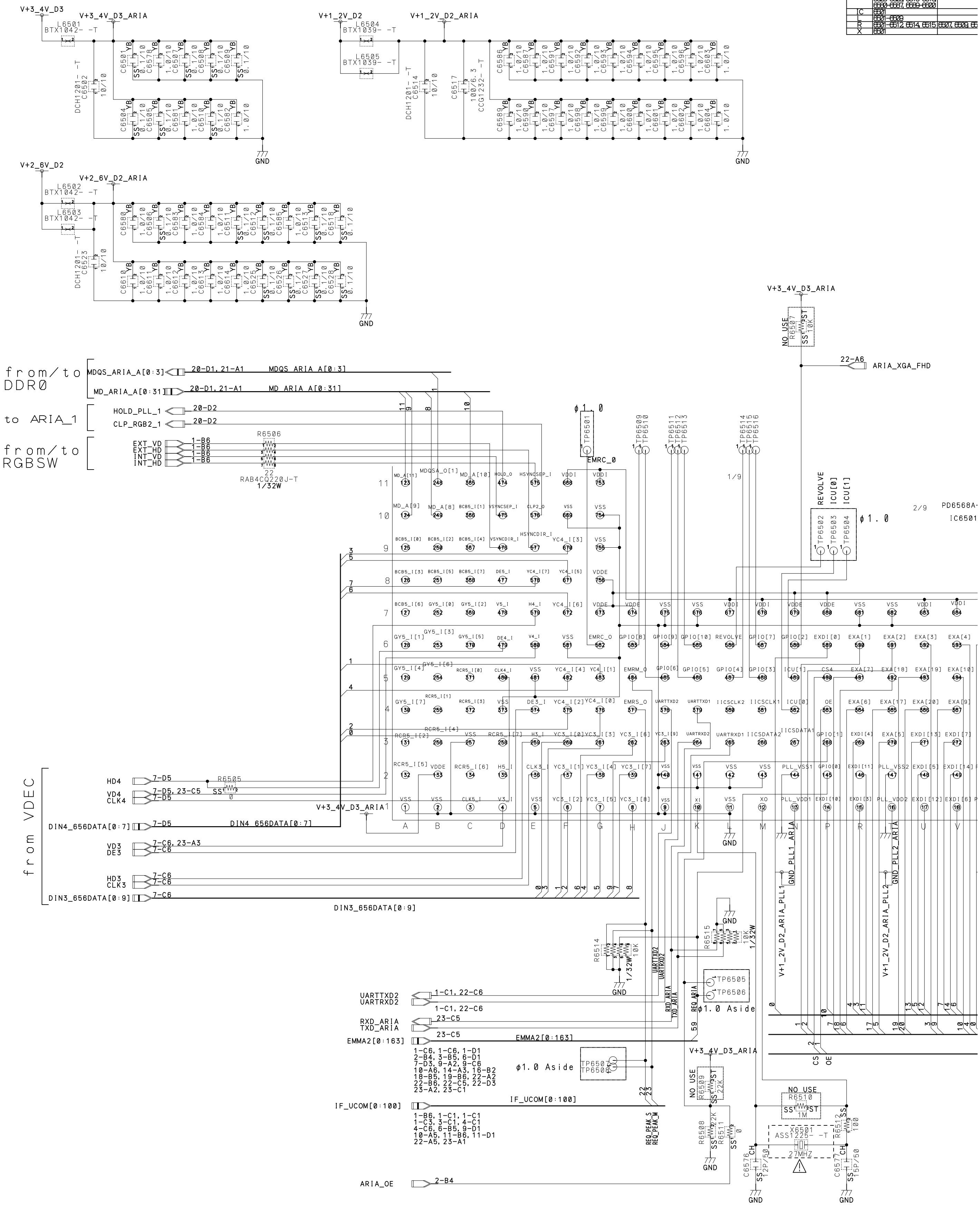
EUH	AGC1083- -PI-K	S29GL512P10TFIR1-K
AUS AUS_D	AGC1084- -PI-K	S29GL256N90TFIR1-K

MAIN ASS'Y (EU_HD,AUS) (18/24)
7404_FLASH BLOCK

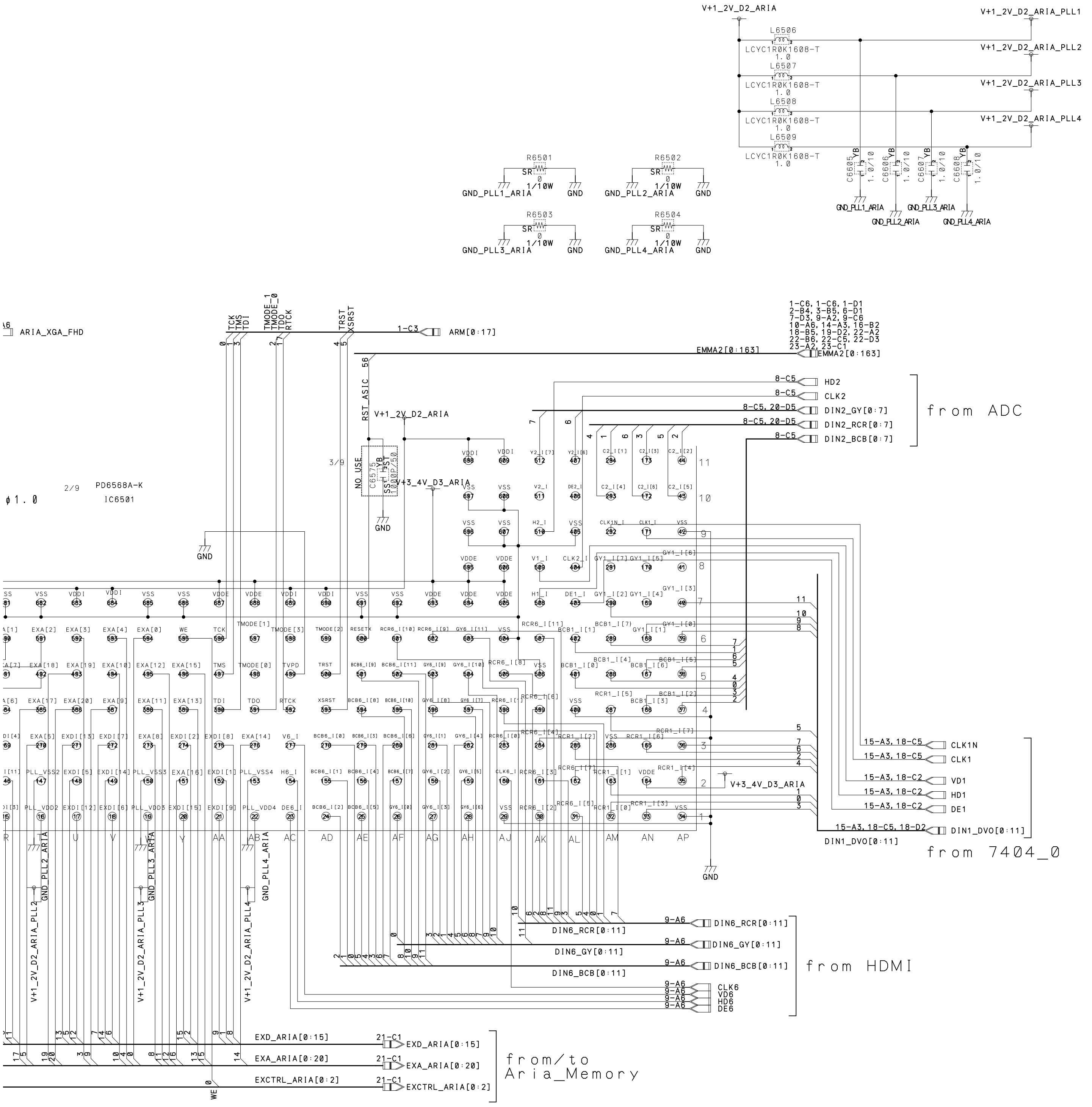
AWV2556-
AWV2557-
AWV2588-

7.19 MAIN ASSY (19/24) [ARIA_0 BLOCK]

ITEM	USED	EUH AWV255
C	6501, 6502, 6504–6514, 6517, 6518, 6523, 6525–6528, 6575–6578, 6580–6587, 6589–6600	6575
IC	6501	
L	6501–6509	
R	6501–6512, 6514, 6515	6507, 6509, 65
X	6501	


V+3_4V_D3
V+3_4V_D3_ARIA
L6501 BTX1042- -T
DCH1201- -T C6502 10/10
V+1_2V_D2
V+1_2V_D2_ARIA
L6504 BTX1039- -T
L6505 BTX1039- -T
DCH1201- -T C6514 10/10
C6517 100/6.3 CCG1232- -T
V+2_6V_D2
V+2_6V_D2_ARIA
L6502 BTX1042- -T
L6503 BTX1042- -T
DCH1201- -T C6523 10/10
GND
NO USE R6507 10K
22-A6 ARIA_XGA_FHD
from/to DDR0
MDQS_ARIA_A[0:3] 20-D1, 21-A1 MDQS ARIA A[0:3]
MD_ARIA_A[0:31] 20-D1, 21-A1 MD ARIA A[0:31]
to ARIA_1
HOLD_PLL_1 20-D2
CLP_RGB2_1 20-D2
from/to RGBSW
EXT_VD 1-B6
EXT_HD 1-B6
INT_VD 1-B6
INT_HD 1-B6
R6506 22 RAB4CQ220J-T 1/32W
ϕ1.0 TP6501 EMRC_0
TP6509 TP6510 TP6511 TP6512 TP6513 TP6514 TP6515 TP6516
1/9
REVOLVE ICU[0] ICU[1]
TP6502 TP6503 TP6504 ϕ1.0
2/9 PD6568A- IC6501
from VDEC
HD4 7-D5
VD4 7-D5, 23-C5
CLK4 7-D5
R6505 0
DIN4_656DATA[0:7] 7-D5 DIN4 656DATA[0:7]
VD3 7-C6, 23-A3
DE3 7-C6
HD3 7-C6
CLK3 7-C6
DIN3_656DATA[0:9] 7-C6 DIN3_656DATA[0:9]
V+3_4V_D3_ARIA
R6514 10K 1/32W
R6515 10K 1/32W
UARTTXD2 UARTRXD2
TP6505 TP6506 ϕ1.0 Aside
UARTTXD2 1-C1, 22-C6
UARTRXD2 1-C1, 22-C6
RXD_ARIA 23-C5
TXD_ARIA 23-C5
EMMA2[0:163] EMMA2[0:163]
1-C6, 1-C6, 1-D1, 2-B4, 3-B5, 6-D1, 7-D3, 9-A2, 9-C6, 10-A6, 14-A3, 16-B2, 18-B5, 19-B6, 22-A2, 22-B6, 22-C5, 22-D3, 23-A2, 23-C1
ϕ1.0 Aside TP6507 TP6508
IF_UCOM[0:100] IF_UCOM[0:100]
1-B6, 1-C1, 1-C1, 1-C3, 3-C1, 4-C1, 4-C6, 6-B5, 9-D1, 10-A5, 11-B6, 11-D1, 22-A5, 23-A1
REQ_PEAK_S REQ_PEAK_M
NO USE R6509 22K
R6508 22K R6511 0
C6576 CH 12P/50
NO USE R6510 1M
X6501 ASS1225- -T 27MHZ
R6512 100
C6577 CH 15P/50
ARIA_OE 2-B4
GND_PLL1_ARIA V+1_2V_D2_ARIA_PLL1 GND_PLL2_ARIA V+1_2V_D2_ARIA_PLL2
CS OE
A B C D E F G H J K L M N P R T U V
1 2 3 4 5 6 7 8 9 10 11

TEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	6501, 6502, 6504-6514, 6517, 6518, 6523, 6525-6528, 6575-6578, 6580-6587, 6589-6600	6575	6575	6575
IC	6501			
L	6501-6509			
R	6501-6512, 6514, 6515	6507, 6509, 6510	6507, 6509, 6510	6507, 6509, 6510
X	6501			

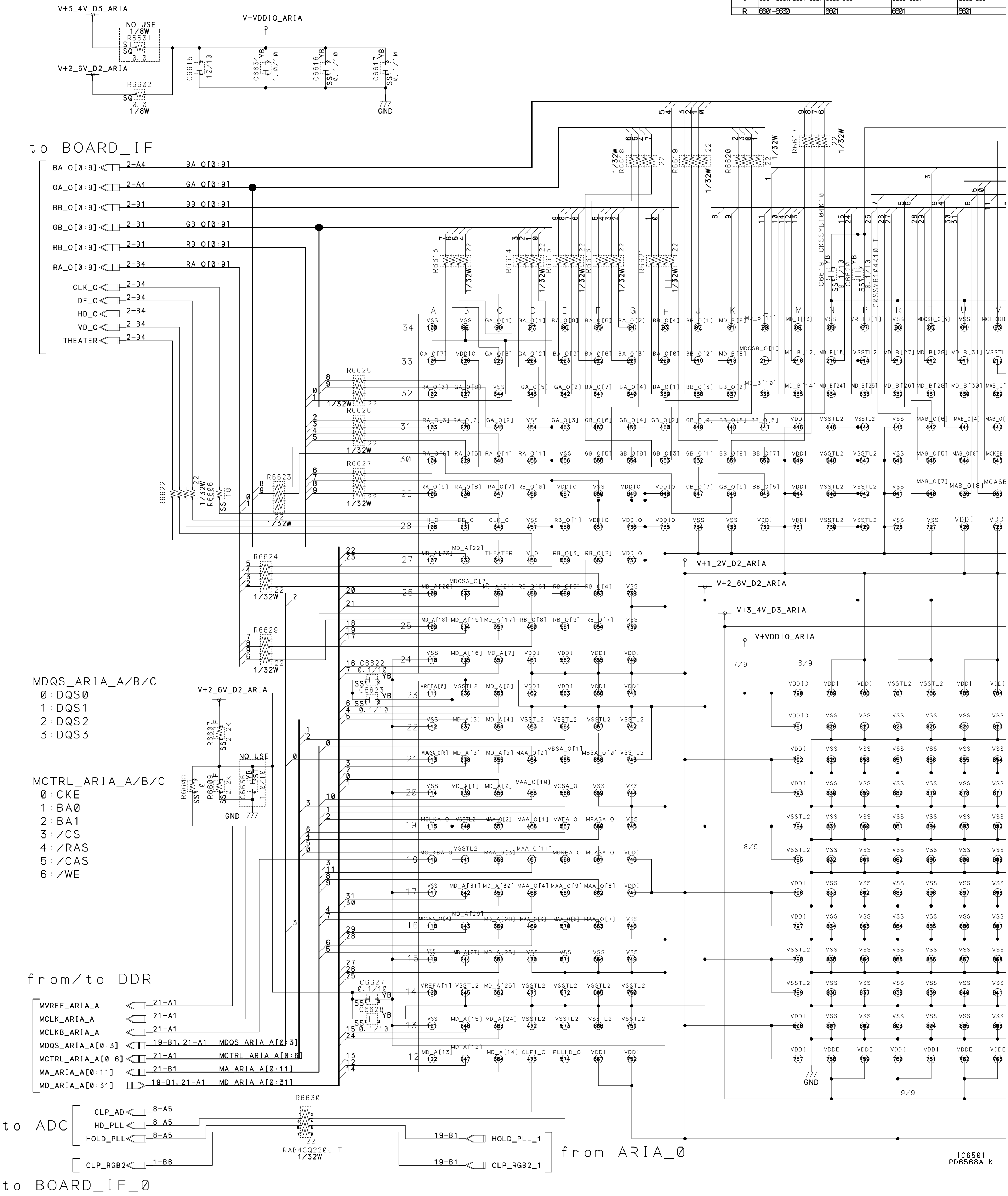

V+1_2V_D2_ARIA
L6506
L6507
L6508
L6509
LCYC1R0K1608-T
1.0
V+1_2V_D2_ARIA_PLL1
V+1_2V_D2_ARIA_PLL2
V+1_2V_D2_ARIA_PLL3
V+1_2V_D2_ARIA_PLL4
C6605
C6606
C6607
C6608
YB
1.0/10
GND_PLL1_ARIA
GND_PLL2_ARIA
GND_PLL3_ARIA
GND_PLL4_ARIA
R6501
R6502
R6503
R6504
SR
0
1/10W
GND
ARIA_XGA_FHD
TCK
TMS
TDI
TMODE_1
TMODE_0
TDO
RTCK
TRST
XSRST
1-C3
ARM[0:17]
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 6-D1
7-D3, 9-A2, 9-C6
10-A6, 14-A3, 16-B2
18-B5, 19-D2, 22-A2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
EMMA2[0:163]
RST_ASIC
V+1_2V_D2_ARIA
8-C5
HD2
CLK2
8-C5, 20-D5
DIN2_GY[0:7]
DIN2_RCR[0:7]
DIN2_BCB[0:7]
from ADC
NO_USE
C6575
0.1/10
V+3_4V_D3_ARIA
GND
3/9
2/9
PD6568A-K
IC6501
φ1.0
15-A3, 18-C5
CLK1N
CLK1
15-A3, 18-C2
VD1
HD1
DE1
15-A3, 18-C5, 18-D2
DIN1_DVO[0:11]
from 7404_0
GND_PLL2_ARIA
GND_PLL3_ARIA
GND_PLL4_ARIA
V+1_2V_D2_ARIA_PLL2
V+1_2V_D2_ARIA_PLL3
V+1_2V_D2_ARIA_PLL4
9-A6
DIN6_RCR[0:11]
DIN6_GY[0:11]
DIN6_BCB[0:11]
CLK6
VD6
HD6
DE6
from HDMI
EXD_ARIA[0:15]
EXA_ARIA[0:20]
EXCTRL_ARIA[0:2]
21-C1
from/to
Aria_Memory
WE

MAIN ASS'Y (EU_HD,AUS) (19/24)
ARIA_0 BLOCK

AWV2556-
AWV2557-
AWV2588-

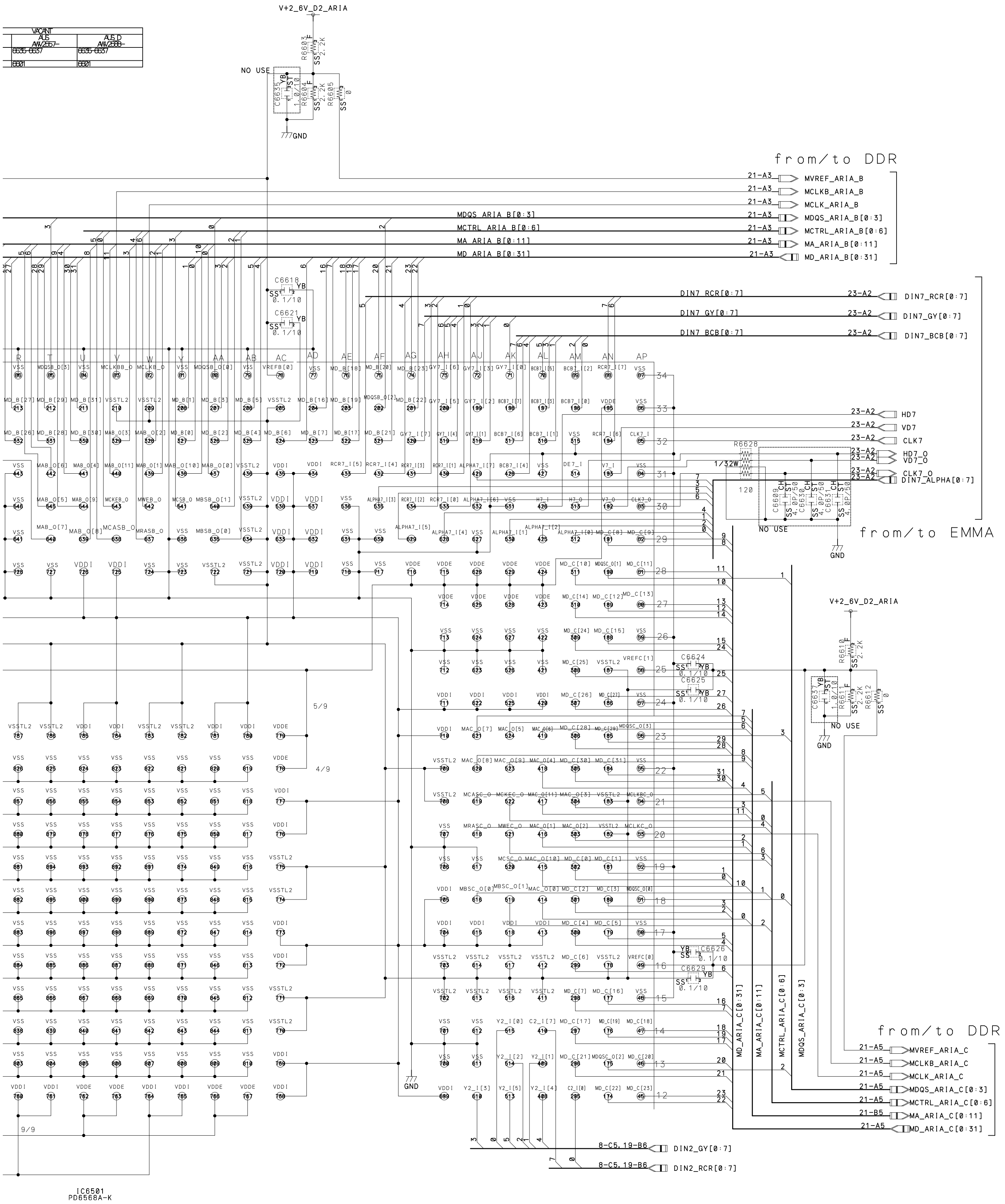
7.20 MAIN ASSY (20/24) [ARIA_1 BLOCK]

ITEM	USED	VACANT		
		EUH AWV2556–	AUS AWV2557–	AUS_D AWV2588–
C	6601–6631, 6634–6637	6635–6637	6635–6637	6635–6637
R	6601–6630	6601	6601	6601



V+3_4V_D3_ARIA
NO USE
1/8W
R6601
ST
SQ
0.0
V+2_6V_D2_ARIA
R6602
V+VDDIO_ARIA
C6615 10/10
C6634 YB 1.0/10
C6616 YB SS 0.1/10
C6617 YB SS 0.1/10
GND
to BOARD_IF
BA_O[0:9] 2-A4 BA O[0:9]
GA_O[0:9] 2-A4 GA O[0:9]
BB_O[0:9] 2-B1 BB O[0:9]
GB_O[0:9] 2-B1 GB O[0:9]
RB_O[0:9] 2-B1 RB O[0:9]
RA_O[0:9] 2-B4 RA O[0:9]
CLK_O 2-B4
DE_O 2-B4
HD_O 2-B4
VD_O 2-B4
THEATER 2-B4
R6613 R6614 R6615 R6616 R6617 R6618 R6619 R6620 R6621 R6622
R6623 R6624 R6625 R6626 R6627 R6629 R6606
22 1/32W
C6619 CKSSYB104K10-T
C6620 CKSSYB104K10-T
V+1_2V_D2_ARIA
V+2_6V_D2_ARIA
V+3_4V_D3_ARIA
V+VDDIO_ARIA
7/9 6/9 8/9 9/9
MDQS_ARIA_A/B/C
0:DQS0
1:DQS1
2:DQS2
3:DQS3
MCTRL_ARIA_A/B/C
0:CKE
1:BA0
2:BA1
3:/CS
4:/RAS
5:/CAS
6:/WE
R6607 2.2K
R6608
R6609 2.2K
C6636 NO USE 1.0/10
C6622 0.1/10 YB
C6623 0.1/10 YB
C6627 0.1/10 YB
C6628 0.1/10 YB
from/to DDR
MVREF_ARIA_A 21-A1
MCLK_ARIA_A 21-A1
MCLKB_ARIA_A 21-A1
MDQS_ARIA_A[0:3] 19-B1,21-A1 MDQS ARIA A[0:3]
MCTRL_ARIA_A[0:6] 21-A1 MCTRL ARIA A[0:6]
MA_ARIA_A[0:11] 21-B1 MA ARIA A[0:11]
MD_ARIA_A[0:31] 19-B1,21-A1 MD ARIA A[0:31]
to ADC
CLP_AD 8-A5
HD_PLL 8-A5
HOLD_PLL 8-A5
R6630 RAB4CQ220J-T 22 1/32W
CLP_RGB2 1-B6
to BOARD_IF_0
19-B1 HOLD_PLL_1
19-B1 CLP_RGB2_1
from ARIA_0
IC6501
PD6568A-K

	VACANT	
	AUS AWV2557-	AUS_D AWV2588-
	6635-6637	6635-6637
	6601	6601

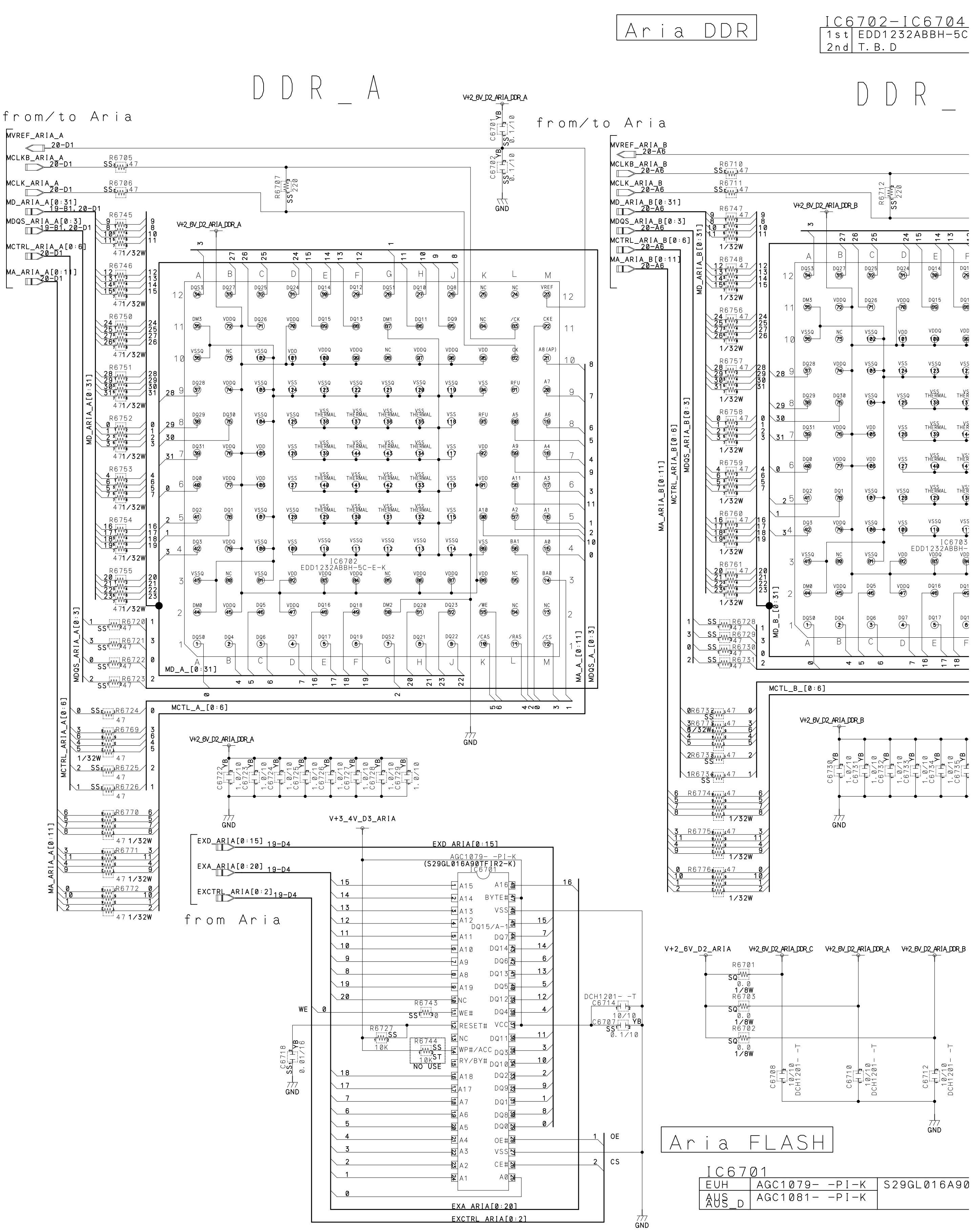


V+2_6V_D2_ARIA
R6603 1/16W F 2.2K SS
NO USE
C6635 YB 1.0/10 ST
R6604 1/16W F 2.2K SS
R6605 1/16W 0 SS
GND
from/to DDR
21-A3 MVREF_ARIA_B
21-A3 MCLKB_ARIA_B
21-A3 MCLK_ARIA_B
MDQS ARIA B[0:3] 21-A3 MDQS_ARIA_B[0:3]
MCTRL ARIA B[0:6] 21-A3 MCTRL_ARIA_B[0:6]
MA ARIA B[0:11] 21-A3 MA_ARIA_B[0:11]
MD ARIA B[0:31] 21-A3 MD_ARIA_B[0:31]
C6618 YB SS 0.1/10
C6621 YB SS 0.1/10
DIN7 RCR[0:7] 23-A2 DIN7_RCR[0:7]
DIN7 GY[0:7] 23-A2 DIN7_GY[0:7]
DIN7 BCB[0:7] 23-A2 DIN7_BCB[0:7]
23-A2 HD7
23-A2 VD7
23-A2 CLK7
R6628 1/32W 120
23-A2 HD7_O
23-A2 VD7_O
23-A2 CLK7_O
23-A2 DIN7_ALPHA[0:7]
C6609 CH 4.0P/50 SS
C6630 CH 4.0P/50 SS
C6631 CH 4.0P/50 SS
NO USE
GND
from/to EMMA
V+2_6V_D2_ARIA
R6610 1/16W F 2.2K SS
C6637 YB 1.0/10 ST
R6611 1/16W F 2.2K SS
R6612 1/16W 0 SS
NO USE
GND
C6624 YB SS 0.1/10
C6625 YB SS 0.1/10
C6626 YB SS 0.1/10
C6629 YB SS 0.1/10
MD_ARIA_C[0:31]
MA_ARIA_C[0:11]
MCTRL_ARIA_C[0:6]
MDQS_ARIA_C[0:3]
from/to DDR
21-A5 MVREF_ARIA_C
21-A5 MCLKB_ARIA_C
21-A5 MCLK_ARIA_C
21-A5 MDQS_ARIA_C[0:3]
21-A5 MCTRL_ARIA_C[0:6]
21-B5 MA_ARIA_C[0:11]
21-A5 MD_ARIA_C[0:31]
8-C5,19-B6 DIN2_GY[0:7]
8-C5,19-B6 DIN2_RCR[0:7]
R T U V W Y AA AB AC AD AE AF AG AH AJ AK AL AM AN AP
34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12
VSS MDQSB_O[3] VSS MCLKBB_O MCLKB_O VSS MDQSB_O[0] VSS VREFB[0] VSS MD_B[18] MD_B[20] MD_B[23] GY7_I[6] GY7_I[3] GY7_I[0] BCB7_I[5] BCB7_I[2] RCR7_I[7] VSS
MD_B[27] MD_B[29] MD_B[31] VSSTL2 VSSTL2 MD_B[1] MD_B[3] MD_B[5] VSSTL2 MD_B[16] MD_B[19] MDQSB_O[2] MD_B[22] GY7_I[5] GY7_I[2] BCB7_I[7] BCB7_I[3] BCB7_I[0] VDDE VSS
MD_B[26] MD_B[28] MD_B[30] MAB_O[3] MAB_O[2] MD_B[0] MD_B[2] MD_B[4] MD_B[6] MD_B[7] MD_B[17] MD_B[21] GY7_I[7] GY7_I[4] GY7_I[1] BCB7_I[6] BCB7_I[1] VSS RCR7_I[6] CLK7_I
VSS MAB_O[6] MAB_O[4] MAB_O[11] MAB_O[1] MAB_O[10] MAB_O[0] VSSTL2 VDDI VDDI RCR7_I[5] RCR7_I[4] RCR7_I[3] RCR7_I[1] ALPHA7_I[7] BCB7_I[4] VSS DE7_I V7_I VSS
VSS MAB_O[5] MAB_O[9] MCKEB_O MWEB_O MCSB_O MBSB_O[1] VSSTL2 VDDI VDDI VSS ALPHA7_I[3] RCR7_I[2] RCR7_I[0] ALPHA7_I[6] VSS H7_I H7_O V7_O CLK7_O
VSS MAB_O[7] MAB_O[8] MCASB_O MRASB_O VSS MBSB_O[0] VSSTL2 VDDI VDDI VSS VSS ALPHA7_I[5] ALPHA7_I[4] VSS ALPHA7_I[1] ALPHA7_I[2] ALPHA7_I[0] MD_C[8] MD_C[9]
VSS VSS VDDI VDDI VSS VSS VSSTL2 VSSTL2 VDDI VDDI VSS VSS VDDE VDDE VDDE VDDE VDDE MD_C[10] MDQSC_O[1] MD_C[11]
VDDE VDDE VDDE VDDE MD_C[14] MD_C[12] MD_C[13]
VSS VSS VSS VSS MD_C[24] MD_C[15] VSS
VSS VSS VSS VSS MD_C[25] VSSTL2 VREFC[1]
VDDI VDDI VDDI VDDI MD_C[26] MD_C[27] VSS
VDDI MAC_O[7] MAC_O[5] MAC_O[6] MD_C[28] MD_C[29] MDQSC_O[3]
VSSTL2 MAC_O[8] MAC_O[9] MAC_O[4] MD_C[30] MD_C[31] VSS
VSSTL2 MCASC_O MCKEC_O MAC_O[11] MAC_O[3] VSSTL2 MCLKBC_O
VSS MRASC_O MWEC_O MAC_O[1] MAC_O[2] VSSTL2 MCLKC_O
VSS VSS MCSC_O MAC_O[10] MD_C[0] MD_C[1] VSS
VDDI MBSC_O[0] MBSC_O[1] MAC_O[0] MD_C[2] MD_C[3] MDQSC_O[0]
VDDI VDDI VDDI VDDI MD_C[4] MD_C[5] VSS
VSSTL2 VSSTL2 VSSTL2 VSSTL2 MD_C[6] VSSTL2 VREFC[0]
VSSTL2 VSSTL2 VSSTL2 VSSTL2 MD_C[7] MD_C[16] VSS
VSS VSS Y2_I[0] C2_I[7] MD_C[17] MD_C[19] MD_C[18]
VSS VSS Y2_I[2] Y2_I[1] MD_C[21] MDQSC_O[2] MD_C[20]
VDDI Y2_I[3] Y2_I[5] Y2_I[4] C2_I[0] MD_C[22] MD_C[23]
VSSTL2 VSSTL2 VDDI VDDI VSSTL2 VSSTL2 VDDI VDDI VDDE
VDDI VDDI VDDE VDDE VDDI VDDI VDDE VDDE VDDI
5/9
4/9
9/9
GND
IC6501
PD6568A-K

MAIN ASS'Y (EU_HD,AUS) (20/24)
ARIA_1 BLOCK

AWV2556-
AWV2557-
AWV2588-

7.21 MAIN ASSY (21/24) [ARIA_MEMORY BLOCK]


A
B
C
D
E
F
Aria DDR
DDR_A
DDR_
from/to Aria
from/to Aria
from Aria
MVREF_ARIA_A 20-D1
MCLKB_ARIA_A 20-D1
MCLK_ARIA_A 20-D1
MD_ARIA_A[0:31] 19-B1,20-D1
MDQS_ARIA_A[0:3] 19-B1,20-D1
MCTRL_ARIA_A[0:6] 20-D1
MA_ARIA_A[0:11] 20-D1
MVREF_ARIA_B 20-A6
MCLKB_ARIA_B 20-A6
MCLK_ARIA_B 20-A6
MD_ARIA_B[0:31] 20-A6
MDQS_ARIA_B[0:3] 20-A6
MCTRL_ARIA_B[0:6] 20-A6
MA_ARIA_B[0:11] 20-A6
V+2_6V_D2_ARIA_DDR_A
V+2_6V_D2_ARIA_DDR_B
V+2_6V_D2_ARIA_DDR_C
V+2_6V_D2_ARIA
V+3_4V_D3_ARIA
IC6702 EDD1232ABBH-5C-E-K
IC6703 EDD1232ABBH-
IC6701 AGC1079- -PI-K (S29GL016A90TFIR2-K)
MD_A_[0:31]
MA_A_[0:11]
MDQS_A_[0:3]
MCTRL_A_[0:6]
MD_B_[0:31]
MCTRL_B_[0:6]
EXD_ARIA[0:15] 19-D4
EXA_ARIA[0:20] 19-D4
EXCTRL_ARIA[0:2] 19-D4
R6705 SS 47
R6706 SS 47
R6707 SS 220
R6710 SS 47
R6711 SS 47
R6712 SS 220
R6745 47 1/32W
R6746 47 1/32W
R6750 47 1/32W
R6751 47 1/32W
R6752 47 1/32W
R6753 47 1/32W
R6754 47 1/32W
R6755 47 1/32W
R6747 47 1/32W
R6748 47 1/32W
R6756 47 1/32W
R6757 47 1/32W
R6758 47 1/32W
R6759 47 1/32W
R6760 47 1/32W
R6761 47 1/32W
R6720 SS 47
R6721 SS 47
R6722 SS 47
R6723 SS 47
R6724 SS 47
R6769 47 1/32W
R6725 SS 47
R6726 SS 47
R6770 47 1/32W
R6771 47 1/32W
R6772 47 1/32W
R6728 SS 47
R6729 SS 47
R6730 SS 47
R6731 SS 47
R6773 47
R6777 47 1/32W
R6774 47 1/32W
R6775 47 1/32W
R6776 47 1/32W
C6701 YB SS 0.1/10
C6702 YB SS 0.1/10
C6722–C6729 YB 1.0/10
C6730–C6735 YB 1.0/10
R6743 SS 47
R6727 SS 10K
R6744 SS ST 10K NO USE
C6714 10/10
C6707 YB SS 0.1/10
DCH1201- -T
C6718 YB SS 0.01/16
R6701 SQ 0.0 1/8W
R6703 SQ 0.0 1/8W
R6702 SQ 0.0 1/8W
C6708 10/10 DCH1201- -T
C6710 10/10 DCH1201- -T
C6712 10/10 DCH1201- -T
WE
OE
CS
GND
A15 A14 A13 A12 A11 A10 A9 A8 A19 NC WE# RESET# NC WP#/ACC RY/BY# A18 A17 A7 A6 A5 A4 A3 A2 A1
A16 BYTE# VSS DQ15/A-1 DQ7 DQ14 DQ6 DQ13 DQ5 DQ12 DQ4 VCC DQ11 DQ3 DQ10 DQ2 DQ9 DQ1 DQ8 DQ0 OE# VSS CE# A0
Aria FLASH

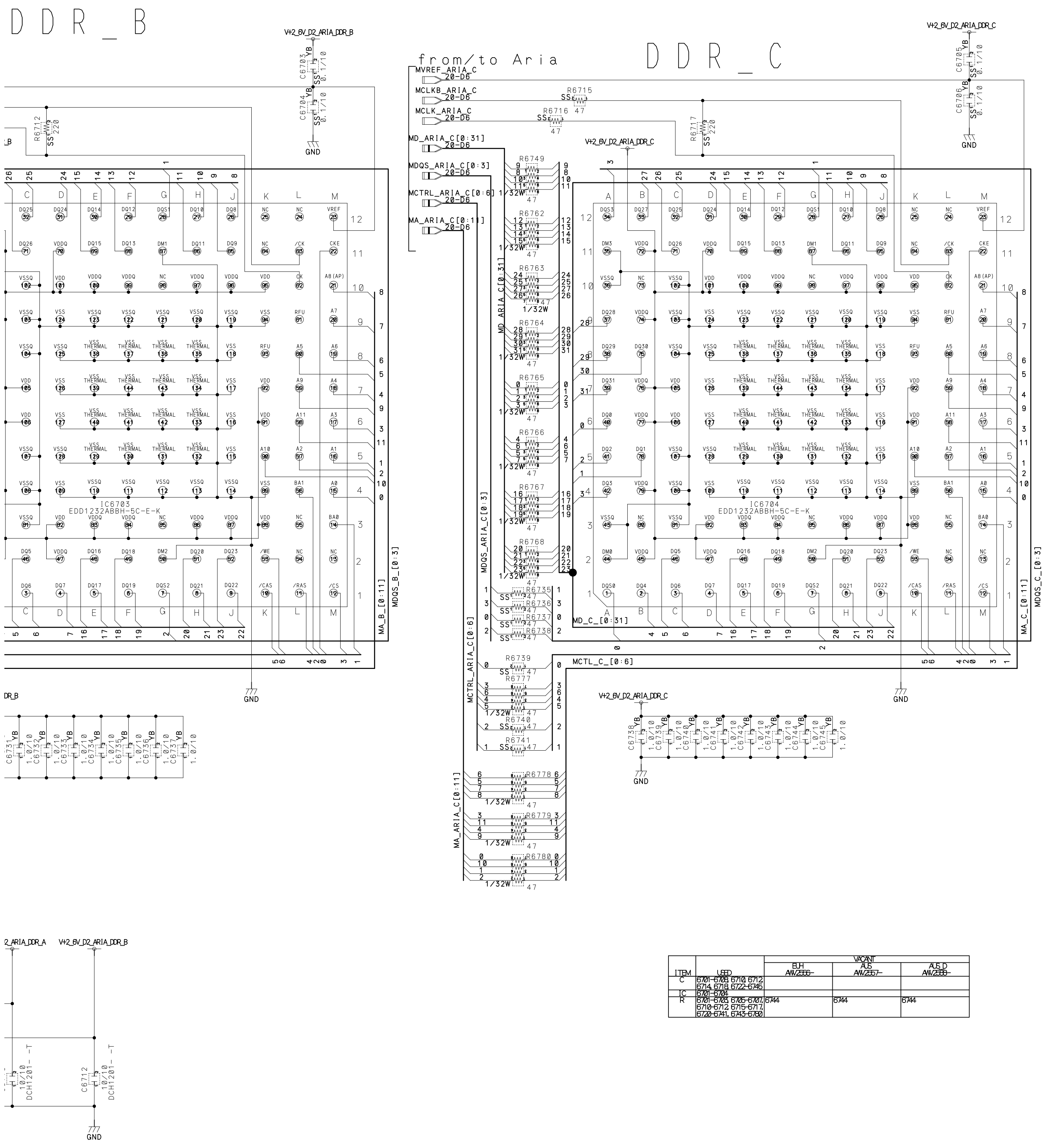
IC6702-IC6704	
1st	EDD1232ABBH-5C
2nd	T.B.D

IC6701

EUH	AGC1079- -PI-K	S29GL016A90
AUS AUS_D	AGC1081- -PI-K	

702-IC6704 Parts Priorty

EDD1232ABBH-5C-E-K
T.B.D


DDR_B
DDR_C
from/to Aria
MVREF_ARIA_C 20-D6
MCLKB_ARIA_C 20-D6
MCLK_ARIA_C 20-D6
MD_ARIA_C[0:31] 20-D6
MDQS_ARIA_C[0:3] 20-D6
MCTRL_ARIA_C[0:6] 20-D6
MA_ARIA_C[0:11] 20-D6
V+2_6V_D2_ARIA_DDR_B
V+2_6V_D2_ARIA_DDR_C
V+2_6V_D2_ARIA_DDR_A
C6703 YB SST 0.1/10
C6704 YB SST 0.1/10
C6705 YB SST 0.1/10
C6706 YB SST 0.1/10
R6712 SS 220
R6717 SS 220
R6715 SS 47
R6716 SS 47
R6749
R6762
R6763
R6764
R6765
R6766
R6767
R6768
R6735
R6736
R6737
R6738
R6739
R6777
R6740
R6741
R6778
R6779
R6780
1/32W 47
IC6703 EDD1232ABBH-5C-E-K
IC6704 EDD1232ABBH-5C-E-K
MD_ARIA_C[0:31]
MDQS_ARIA_C[0:3]
MCTRL_ARIA_C[0:6]
MA_ARIA_C[0:11]
MD_C_[0:31]
MCTL_C_[0:6]
MA_B_[0:11]
MDQS_B_[0:3]
MA_C_[0:11]
MDQS_C_[0:3]
C6731 C6732 C6733 C6734 C6735 C6736 C6737 YB 1.0/10
C6738 C6739 C6740 C6741 C6742 C6743 C6744 C6745 YB 1.0/10
C6712 10/10 DCH1201- -T
10/10 DCH1201- -T
GND

ITEM	USED	VACANT EUH AWV2556-	 AUS AWV2557-	 AUS_D AWV2588-
C	6701-6708, 6710, 6712, 6714, 6718, 6722-6745			
IC	6701-6704			
R	6701-6703, 6705-6707, 6710-6712, 6715-6717, 6720-6741, 6743-6780	6744	6744	6744

MAIN ASS'Y (EU_HD, AUS) (21/24)
ARIA_MEMORY BLOCK

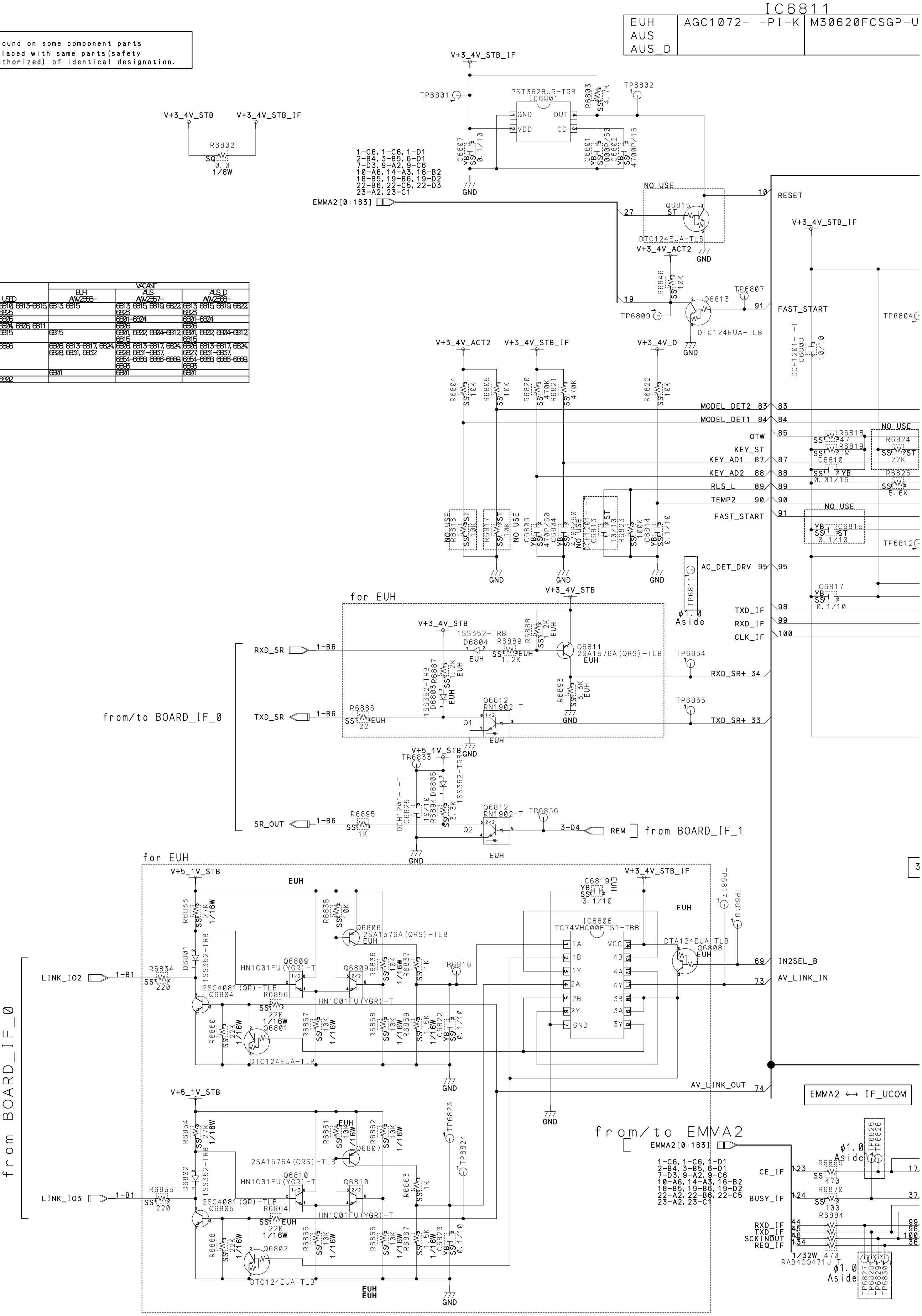
AWV2556-
AWV2557-
AWV2588-

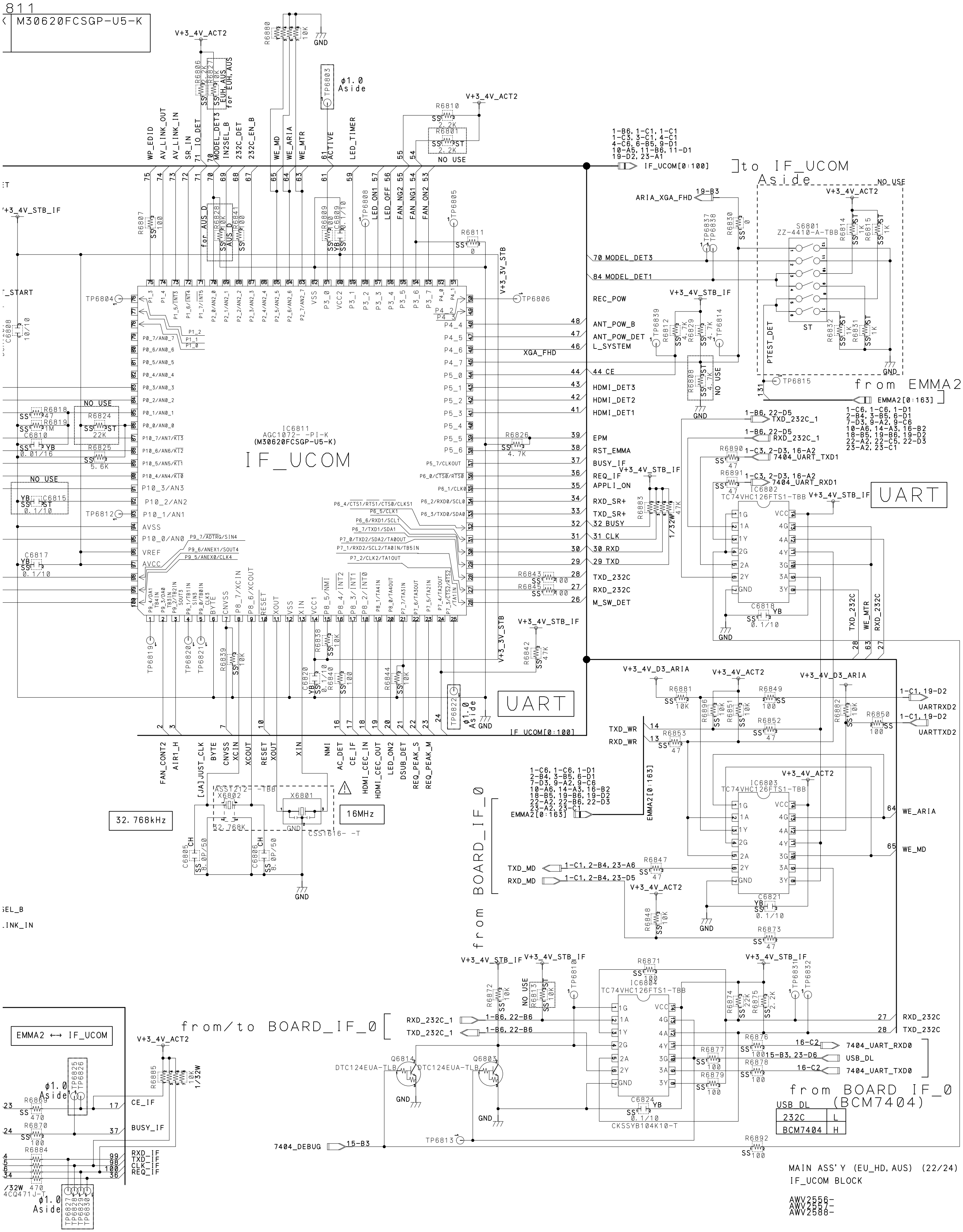
-K	S29GL016A90TFIR2-K
-K	

7.22 MAIN ASSY (22/24) [IF_UCOM BLOCK]

The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.

ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	6801-6810, 6813-6815, 6817-6825	6813, 6815	6813, 6815, 6819, 6822, 6823	6813, 6815, 6819, 6822, 6823
D	6801-6805		6801-6804	6801-6804
IC	6801-6804, 6806, 6811		6806	6806
Q	6801-6815	6815	6801, 6802, 6804-6812, 6815	6801, 6802, 6804-6812, 6815
R	6801-6896	6808, 6813-6817, 6824, 6828, 6831, 6832	6808, 6813-6817, 6824, 6828, 6831-6837, 6854-6868, 6886-6889, 6893	6808, 6813-6817, 6824, 6827, 6831-6837, 6854-6868, 6886-6889, 6893
S	6801	6801	6801	6801
X	6801, 6802			

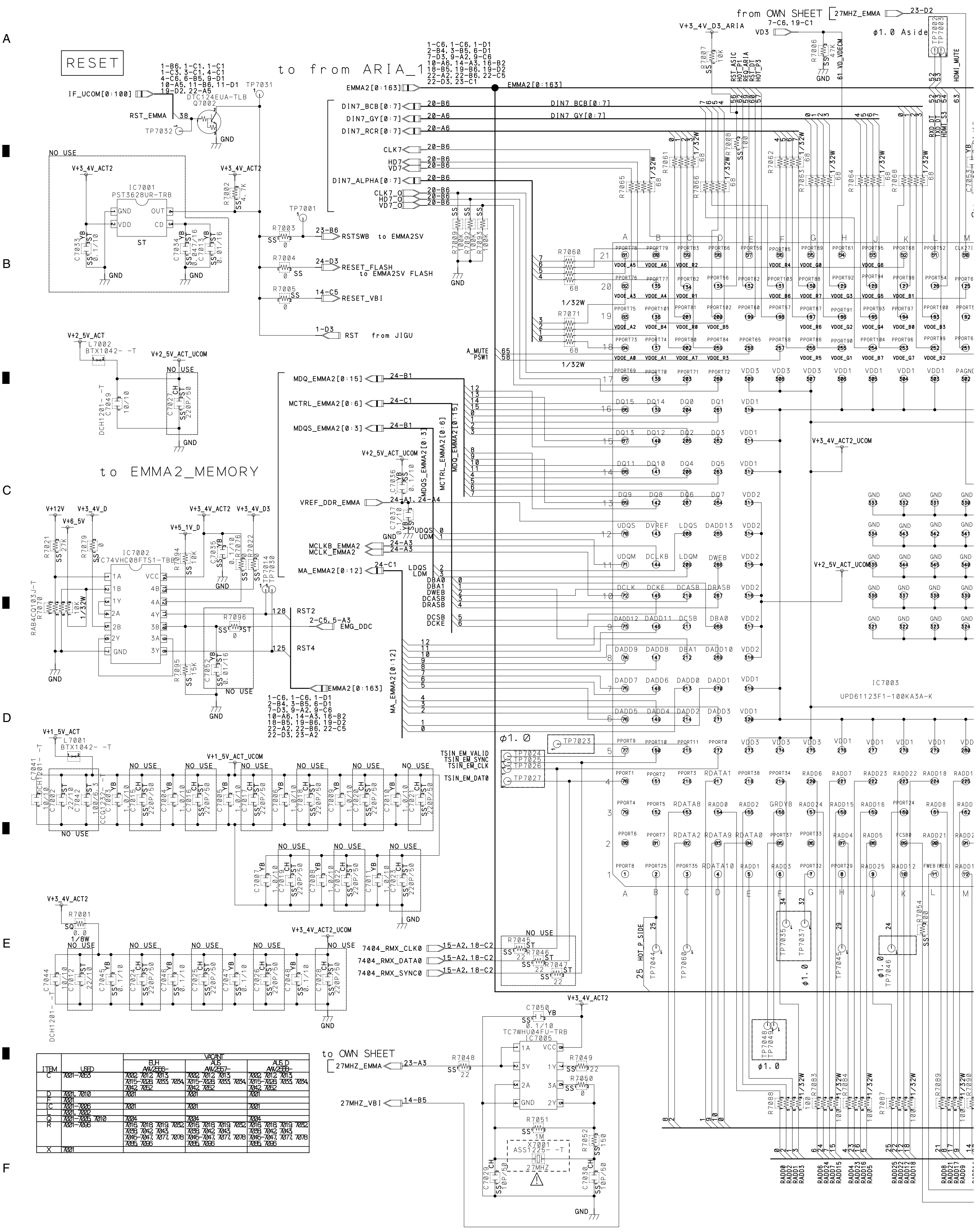

IC6811
EUH
AUS
AUS_D
AGC1072- -PI-K
M30620FCSGP-U
V+3_4V_STB
V+3_4V_STB_IF
R6802
SQ
0.0
1/8W
TP6801
PST3628UR-TRB
IC6801
GND
OUT
VDD
CD
R6803
4.7K
TP6802
C6807
0.1/10
C6801
1000P/50
C6802
4700P/16
GND
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 6-D1
7-D3, 9-A2, 9-C6
10-A6, 14-A3, 16-B2
18-B5, 19-B6, 19-D2
22-B6, 22-C5, 22-D3
23-A2, 23-C1
EMMA2[0:163]
NO USE
Q6815
DTC124EUA-TLB
V+3_4V_ACT2
10
RESET
27
19
R6846
10K
TP6807
Q6813
91
FAST_START
TP6809
TP6804
DCH1201- -T
C6808
10/10
V+3_4V_D
R6804
10K
R6805
10K
R6820
470K
R6821
470K
R6822
10K
MODEL_DET2 83
MODEL_DET1 84
OTW 85
KEY_ST
KEY_AD1 87
KEY_AD2 88
RLS_L 89
TEMP2 90
FAST_START 91
R6818
47
R6819
1M
C6810
0.01/16
R6824
22K
R6825
5.6K
C6815
0.1/10
TP6812
R6816
R6817
C6803
470P/50
C6804
470P/50
C6813
R6823
100K
C6814
0.1/10
TP6811
AC_DET_DRV 95
φ1.0
Aside
C6817
0.1/10
TXD_IF 98
RXD_IF 99
CLK_IF 100
for EUH
V+3_4V_STB
1SS352-TRB
D6804
R6889
1.2K
R6888
1.2K
Q6811
2SA1576A(QRS)-TLB
RXD_SR
1-B6
TP6834
RXD_SR+ 34
R6887
D6803
R6893
3.3K
Q6812
RN1902-T
TXD_SR
R6886
22
Q1
TP6835
TXD_SR+ 33
from/to BOARD_IF_0
V+5_1V_STB
TP6833
D6805
C6825
R6894
3.3K
R6895
1K
Q2
TP6836
3-D4
SR_OUT
REM
from BOARD_IF_1
C6819
V+3_4V_STB_IF
TP6817
TP6818
R6833
27K
1/16W
D6801
1SS352-TRB
R6835
10K
Q6806
2SA1576A(QRS)-TLB
Q6809
HN1C01FU(YGR)-T
R6836
R6837
1K
TR6816
IC6806
TC74VHC00FTS1-TBB
1A
1B
1Y
2A
2B
2Y
GND
VCC
4B
4A
4Y
3B
3A
3Y
DTA124EUA-TLB
Q6808
69
IN2SEL_B
73
AV_LINK_IN
LINK_IO2
1-B1
R6834
220
2SC4081(QR)-TLB
Q6804
R6856
22K
1/16W
R6857
10K
R6858
10K
R6859
1.5K
C6822
0.1/10
R6860
22K
Q6801
DTC124EUA-TLB
AV_LINK_OUT
74
EMMA2 ↔ IF_UCOM
from BOARD_IF_0
R6854
27K
R6861
10K
R6862
10K
Q6807
TP6823
TP6824
D6802
Q6810
R6863
1K
from/to EMMA2
LINK_IO3
R6855
220
2SC4081(QR)-TLB
Q6805
R6864
22K
R6865
10K
R6866
10K
R6867
1.5K
C6823
0.1/10
R6868
22K
Q6802
DTC124EUA-TLB
TP6825
TP6826
R6869
470
CE_IF 123
17
R6870
470
BUSY_IF 124
37
R6884
100
RXD_IF 44
TXD_IF 45
SCKINOUT 46
REQ_IF 134
99
98
100
36
1/32W 470
RAB4CQ471J-T
TP6827
TP6828
TP6829
TP6830
GND
EUH


811
M30620FCSGP-U5-K
IC6811
AGC1072- -PI-K
(M30620FCSGP-U5-K)
IF_UCOM
UART
V+3_4V_ACT2
V+3_4V_STB_IF
V+3_4V_D3_ARIA
V+3_3V_STB
WP_EDID
AV_LINK_OUT
AV_LINK_IN
SR_IN
IO_DET
MODEL_DET3
IN2SEL_B
232C_DET
232C_EN_B
WE_MD
WE_ARIA
WE_MTR
ACTIVE
LED_TIMER
LED_ON1
LED_OFF
FAN_NG2
FAN_NG1
FAN_ON2
for AUS_D
AUS_D
EUH,AUS
for EUH,AUS
NO USE
φ1.0
Aside
IF_UCOM[0:100]
to IF_UCOM
Aside
1-B6, 1-C1, 1-C1
1-C3, 3-C1, 4-C1
4-C6, 6-B5, 9-D1
10-A5, 11-B6, 11-D1
19-D2, 23-A1
ARIA_XGA_FHD
19-B3
S6801
ZZ-4410-A-TBB
ST
PTEST_DET
GND
70 MODEL_DET3
84 MODEL_DET1
REC_POW
ANT_POW_B
ANT_POW_DET
L_SYSTEM
XGA_FHD
44 CE
HDMI_DET3
HDMI_DET2
HDMI_DET1
EPM
RST_EMMA
BUSY_IF
REQ_IF
APPLI_ON
RXD_SR+
TXD_SR+
32 BUSY
31 CLK
30 RXD
29 TXD
TXD_232C
RXD_232C
M_SW_DET
from EMMA2
EMMA2[0:163]
1-C6, 1-C6, 1-D1
2-B4, 3-B5, 6-D1
7-D3, 9-A2, 9-C6
10-A6, 14-A3, 16-B2
18-B5, 19-B6, 19-D2
22-A2, 22-B6, 22-D3
23-A2, 23-C1
1-B6, 22-D5
TXD_232C_1
RXD_232C_1
1-C3, 2-D3, 16-A2
7404_UART_TXD1
7404_UART_RXD1
IC6802
TC74VHC126FTS1-TBB
IC6803
TC74VHC126FTS1-TBB
IC6804
TC74VHC126FTS1-TBB
1G 1A 1Y 2G 2A 2Y GND VCC 4G 4A 4Y 3G 3A 3Y
TXD_232C
WE_MTR
RXD_232C
1-C1, 19-D2
UARTRXD2
UARTTXD2
TXD_WR
RXD_WR
WE_ARIA
WE_MD
TXD_MD
RXD_MD
1-C1, 2-B4, 23-A6
1-C1, 2-B4, 23-D5
from BOARD_IF_0
FAN_CONT2
AIR1_H
[JA]JUST_CLK
BYTE
CNVSS
XCIN
XCOUT
RESET
XOUT
XIN
NMI
AC_DET
CE_IF
HDMI_CEC_IN
HDMI_CEC_OUT
LED_ON2
DSUB_DET
REQ_PEAK_S
REQ_PEAK_M
X6802
ASST212- -TBB
32.768K
X6801
CSS1616- -T
32.768kHz
16MHz
EMMA2 ↔ IF_UCOM
CE_IF
BUSY_IF
RXD_IF
TXD_IF
CLK_IF
REQ_IF
from/to BOARD_IF_0
RXD_232C_1
TXD_232C_1
1-B6, 22-B6
Q6814
DTC124EUA-TLB
Q6803
DTC124EUA-TLB
7404_DEBUG
15-B3
TP6813
CKSSYB104K10-T
16-C2
7404_UART_RXD0
15-B3, 23-D6
USB_DL
7404_UART_TXD0
from BOARD IF_0
(BCM7404)
USB DL
232C L
BCM7404 H

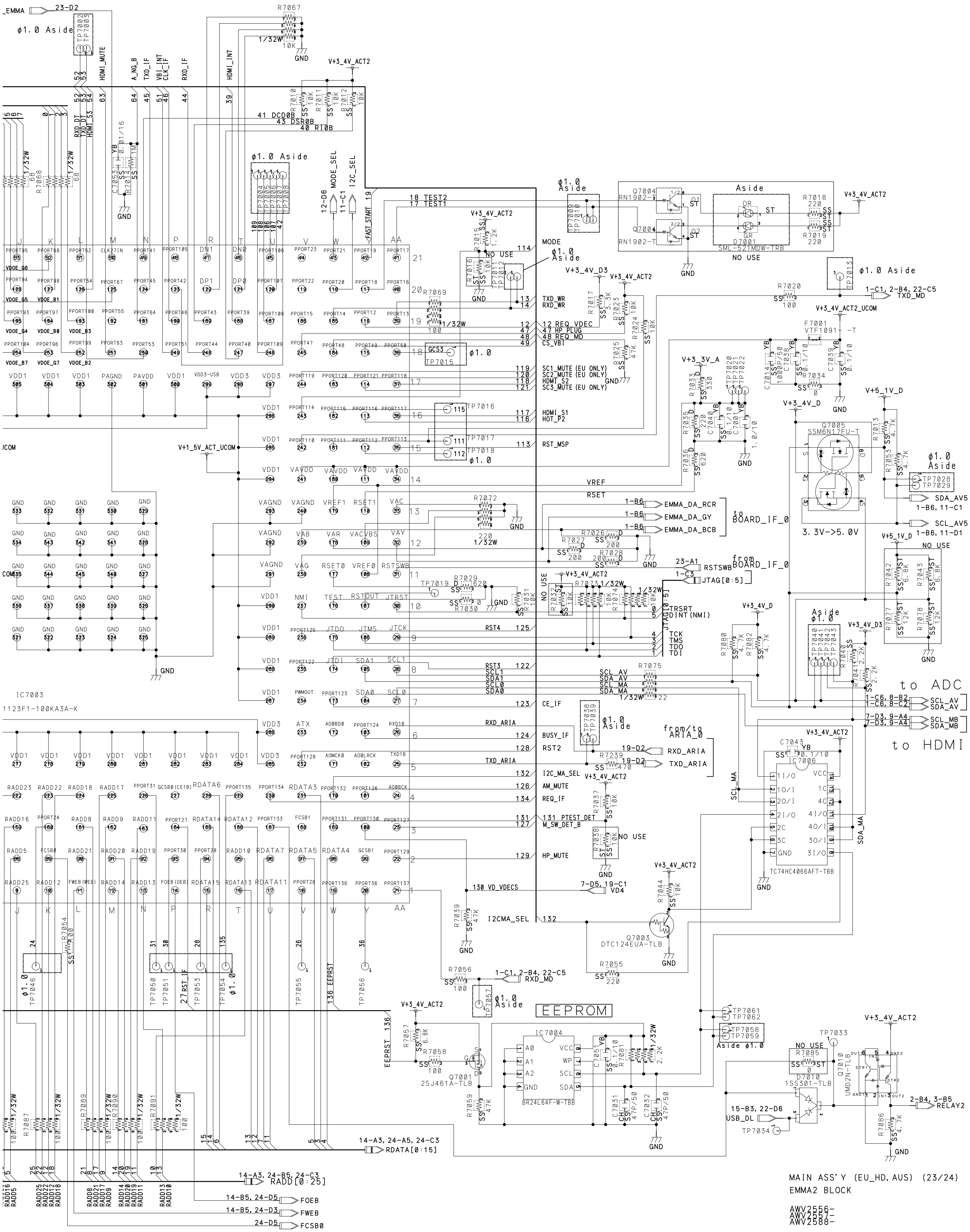
MAIN ASS'Y (EU_HD,AUS) (22/24)
IF_UCOM BLOCK

AWV2556-
AWV2557-
AWV2588-

7.23 MAIN ASSY (23/24) [EMMA2 BLOCK]


RESET
to from ARIA_1
to EMMA2_MEMORY
from OWN SHEET
to OWN SHEET
IF_UCOM[0:100]
RST_EMMA
Q7002 DTC124EUA-TLB
IC7001 PST3628UR-TRB
IC7002 TC74VHC08FTS1-TBB
IC7003 UPD61123F1-100KA3A-K
IC7005 TC7WHU04FU-TRB
X7001 ASS1225- -T 27MHZ
EMMA2[0:163]
DIN7_BCB[0:7]
DIN7_GY[0:7]
DIN7_RCR[0:7]
CLK7
HD7
VD7
DIN7_ALPHA[0:7]
CLK7_O
HD7_O
VD7_O
RSTSWB to EMMA2SV
RESET_FLASH to EMMA2SV FLASH
RESET_VBI
RST from JIGU
MDQ_EMMA2[0:15]
MCTRL_EMMA2[0:6]
MDQS_EMMA2[0:3]
VREF_DDR_EMMA
MCLKB_EMMA2
MCLK_EMMA2
MA_EMMA2[0:12]
EMG_DDC
TSIN_EM_VALID
TSIN_EM_SYNC
TSIN_EM_CLK
TSIN_EM_DAT0
7404_RMX_CLK0
7404_RMX_DATA0
7404_RMX_SYNC0
27MHZ_EMMA
27MHZ_VBI
HOT_P_SIDE
HDMI_MUTE
NO USE
GND
φ1.0 Aside

ITEM	USED	VACANT		
		EUH AWV2556-	AUS AWV2557-	AUS_D AWV2588-
C	7001–7053	7002, 7012, 7013, 7015–7028, 7033, 7034, 7042, 7052	7002, 7012, 7013, 7015–7028, 7033, 7034, 7042, 7052	7002, 7012, 7013, 7015–7028, 7033, 7034, 7042, 7052
D	7001, 7010	7001	7001	7001
F	7001			
IC	7001–7006	7001	7001	7001
L	7001, 7002			
Q	7001–7005, 7010	7004	7004	7004
R	7001–7096	7016, 7018, 7019, 7032, 7038, 7042, 7043, 7045–7047, 7077, 7078 7085, 7096	7016, 7018, 7019, 7032, 7038, 7042, 7043, 7045–7047, 7077, 7078 7085, 7096	7016, 7018, 7019, 7032, 7038, 7042, 7043, 7045–7047, 7077, 7078 7085, 7096
X	7001			

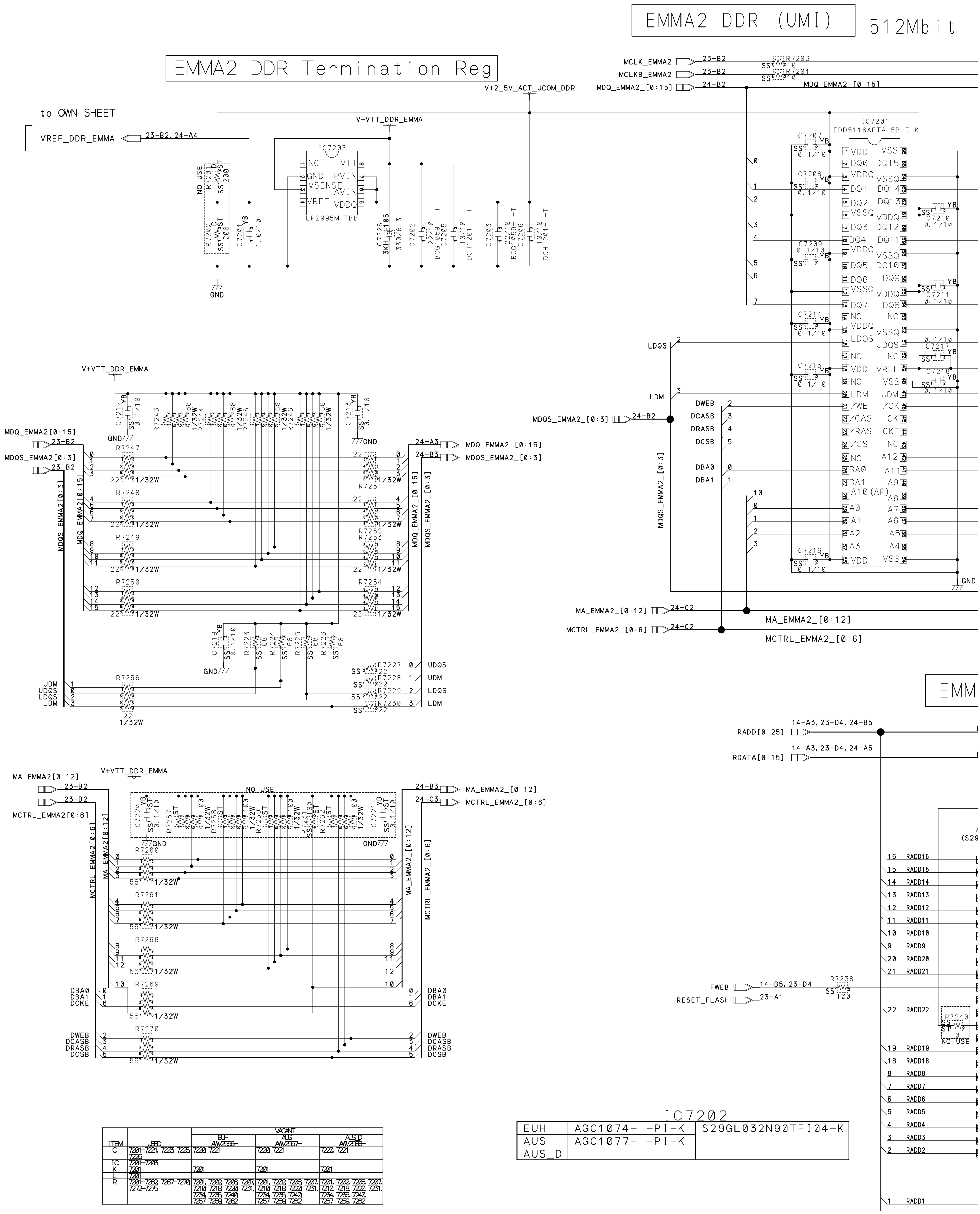


_EMMA
23-D2
ϕ1.0 Aside
R7067
1/32W
10K
GND
V+3_4V_ACT2
HDMI_MUTE
A_NG_B
TXD_IF
VBI_INT
CLK_IF
RXD_IF
HDMI_INT
41 DCD0B
43 DSR0B
40 RI0B
MODE_SEL
I2C_SEL
12-D6
11-C1
FAST_START
18 TEST2
17 TEST1
MODE
NO USE
Q7004
RN1902-T
D7001
SML-521MDW-TRB
R7018
220
R7019
220
TP7013
1-C1, 2-B4, 22-C5
TXD_MD
R7020
100
V+3_4V_ACT2_UCOM
F7001
VTF1091-T
TXD_WR
RXD_WR
12 REQ_VDEC
47 HP_PLUG
48 REQ_MD
CS_VBI
GCS3
TP7015
119 SC1_MUTE (EU ONLY)
120 SC2_MUTE (EU ONLY)
118 HDMI_S2
121 SC3_MUTE (EU ONLY)
TP7016
117 HDMI_S1
116 HOT_P2
TP7017
TP7018
113 RST_MSP
V+1_5V_ACT_UCOM
Q7005
SSM6N17FU-T
TP7028
TP7029
SDA_AV5
1-B6, 11-C1
SCL_AV5
1-B6, 11-D1
3.3V->5.0V
VREF
RSET
EMMA_DA_RCR
EMMA_DA_GY
EMMA_DA_BCB
to BOARD_IF_0
R7072
220
1/32W
R7026
R7027
R7028
23-A1
RSTSWB
from BOARD_IF_0
1-C3
JTAG[0:5]
TP7019
R7029
R7030
R7031
R7073
R7074
TRSRT
DINT (NMI)
TCK
TMS
TDO
TDI
RST4
RST3
SCL1
SDA1
SCL0
SDA0
SCL_AV
SDA_AV
SCL_MA
SDA_MA
R7075
to ADC
1-C6, 8-B2
1-C6, 8-C2
SCL_AV
SDA_AV
7-D3, 9-A4
SCL_MB
SDA_MB
to HDMI
IC7003
1123F1-100KA3A-K
CE_IF
TP7038
TP7039
RXD_ARIA
BUSY_IF
RST2
TXD_ARIA
from/to ARIA_0
19-D2
RXD_ARIA
TXD_ARIA
R7239
470
I2C_MA_SEL
AM_MUTE
REQ_IF
131 PTEST_DET
M_SW_DET_B
HP_MUTE
R7037
R7038
C7043
IC7006
TC74HC4066AFT-TBB
130 VD_VDECS
7-D5, 19-C1
VD4
R7044
R7039
I2CMA_SEL
Q7003
DTC124EUA-TLB
R7055
220
R7056
100
1-C1, 2-B4, 22-C5
RXD_MD
TP7057
EEPROM
IC7004
BR24L64F-W-TBB
A0
A1
A2
GND
VCC
WP
SCL
SDA
Q7001
2SJ461A-TLB
R7057
R7058
R7059
EEPRST
TP7061
TP7062
TP7058
TP7059
TP7033
R7085
D7010
1SS301-TLB
Q7010
UMD2N-TLB
15-B3, 22-D6
USB_DL
TP7034
2-B4, 3-B5
RELAY2
R7086
TP7046
TP7050
TP7051
27 RST_IF
TP7053
TP7054
TP7055
TP7056
136 EEPRST
R7054
R7087
R7089
R7090
R7091
14-A3, 24-A5, 24-C3
RDATA[0:15]
14-A3, 24-B5, 24-C3
RADD[0:25]
14-B5, 24-D5
FOEB
14-B5, 24-D3
FWEB
24-D5
FCSB0

MAIN ASS'Y (EU_HD, AUS) (23/24)
EMMA2 BLOCK

AWV2556-
AWV2557-
AWV2588-

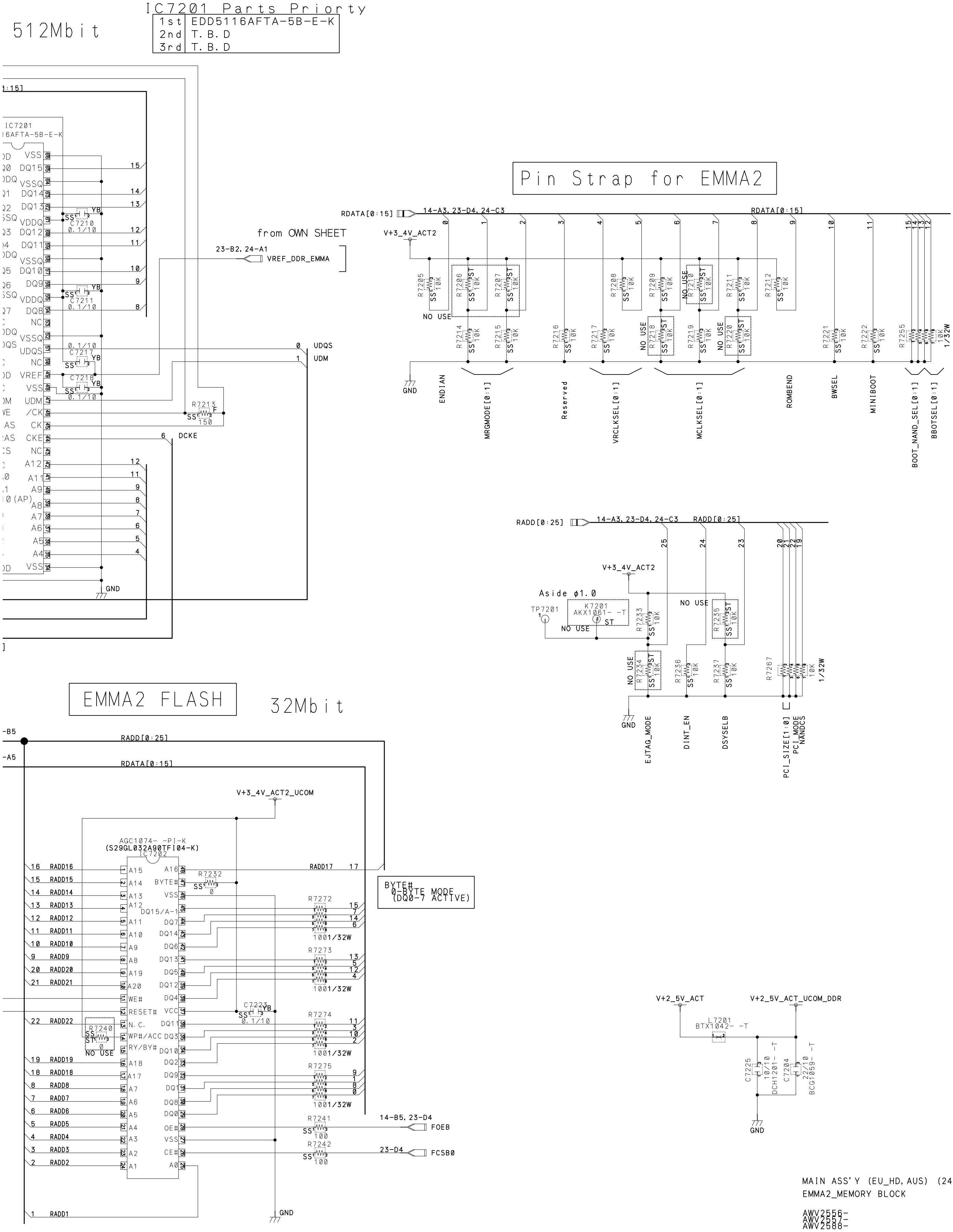
7.24 MAIN ASSY (24/24) [EMMA2_MEMORY BLOCK]


EMMA2 DDR (UMI)
512Mbit
EMMA2 DDR Termination Reg
to OWN SHEET
VREF_DDR_EMMA
23-B2, 24-A4
V+2_5V_ACT_UCOM_DDR
V+VTT_DDR_EMMA
IC7203
LP2995M-TBB
NC
GND
VSENSE
VREF
VTT
PVIN
AVIN
VDDQ
NO USE
GND
MCLK_EMMA2
MCLKB_EMMA2
MDQ_EMMA2_[0:15]
23-B2
24-B2
R7203
R7204
IC7201
EDD5116AFTA-5B-E-K
VDD
DQ0
VDDQ
DQ1
DQ2
VSSQ
DQ3
DQ4
DQ5
DQ6
DQ7
NC
LDQS
LDM
/WE
/CAS
/RAS
/CS
BA0
BA1
A10(AP)
A0
A1
A2
A3
VSS
DQ15
DQ14
DQ13
DQ12
DQ11
DQ10
DQ9
DQ8
UDQS
VREF
UDM
/CK
CK
CKE
A12
A11
A9
A8
A7
A6
A5
A4
LDQS
LDM
DWEB
DCASB
DRASB
DCSB
DBA0
DBA1
MDQS_EMMA2_[0:3]
24-B2
MA_EMMA2_[0:12]
MCTRL_EMMA2_[0:6]
24-C2
24-A3
24-B3
24-C3
R7247
R7248
R7249
R7250
R7251
R7252
R7253
R7254
R7256
R7227
R7228
R7229
R7230
UDQS
UDM
LDQS
LDM
1/32W
R7260
R7261
R7268
R7269
R7270
DBA0
DBA1
DCKE
DWEB
DCASB
DRASB
DCSB
RADD[0:25]
RDATA[0:15]
14-A3, 23-D4, 24-B5
14-A3, 23-D4, 24-A5
FWEB
RESET_FLASH
14-B5, 23-D4
23-A1
R7238
R7240
RADD16
RADD15
RADD14
RADD13
RADD12
RADD11
RADD10
RADD9
RADD20
RADD21
RADD22
RADD19
RADD18
RADD8
RADD7
RADD6
RADD5
RADD4
RADD3
RADD2
RADD1
EMM

ITEM	USED	VACANT		
		EUH AWW2556-	AUS AWW2557-	AUS D AWW2588-
C	7201–7221, 7223, 7225, 7226	7220, 7221	7220, 7221	7220, 7221
IC	7201–7203			
K	7201	7201	7201	7201
L	7201			
R	7201–7262, 7267–7270, 7272–7275	7201, 7202, 7206, 7207, 7210, 7218, 7220, 7231, 7234, 7235, 7240, 7257–7259, 7262	7201, 7202, 7206, 7207, 7210, 7218, 7220, 7231, 7234, 7235, 7240, 7257–7259, 7262	7201, 7202, 7206, 7207, 7210, 7218, 7220, 7231, 7234, 7235, 7240, 7257–7259, 7262

IC7202

EUH	AGC1074- -PI-K	S29GL032N90TFI04-K
AUS AUS_D	AGC1077- -PI-K	

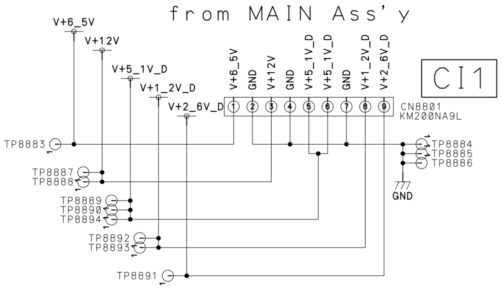


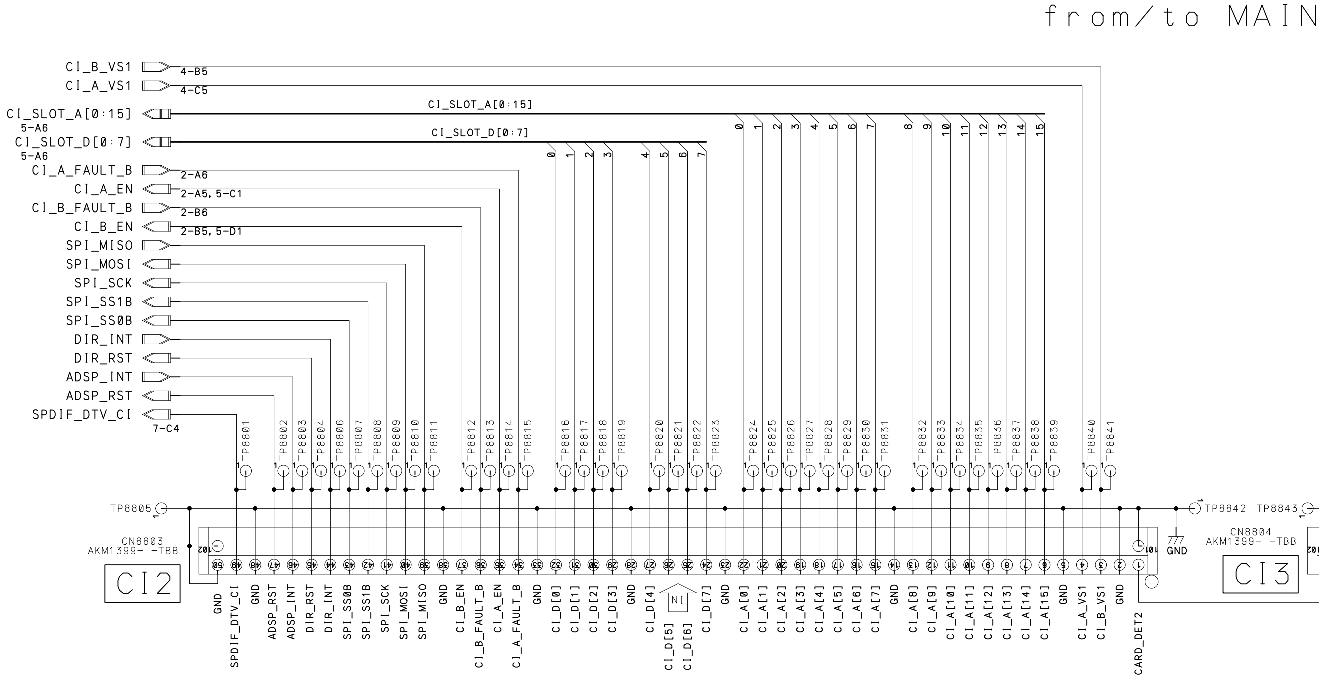
512Mbit
IC7201 Parts Priorty
1st EDD5116AFTA-5B-E-K
2nd T.B.D
3rd T.B.D
IC7201
16AFTA-5B-E-K
VSS DQ15 VSSQ DQ14 DQ13 VDDQ DQ12 DQ11 VSSQ DQ10 DQ9 VDDQ DQ8 NC VSSQ UDQS NC VREF VSS UDM /CK CK CKE NC A12 A11 A9 A8 A7 A6 A5 A4 VSS
C7210 0.1/10
C7211 0.1/10
C7217 0.1/10
C7218 0.1/10
YB
from OWN SHEET
23-B2, 24-A1
VREF_DDR_EMMA
R7213 150 F
UDQS
UDM
DCKE
GND
Pin Strap for EMMA2
RDATA[0:15]
14-A3, 23-D4, 24-C3
V+3_4V_ACT2
R7205 R7206 R7207 R7208 R7209 R7210 R7211 R7212
R7214 R7215 R7216 R7217 R7218 R7219 R7220 R7221 R7222 R7255
10K
1/32W
NO USE
ENDIAN
MRGMODE[0:1]
Reserved
VRCLKSEL[0:1]
MCLKSEL[0:1]
ROMBEND
BWSEL
MINIBOOT
BOOT_NAND_SEL[0:1]
BBOTSEL[0:1]
RADD[0:25]
V+3_4V_ACT2
Aside φ1.0
TP7201
K7201
AKX1061- -T
ST
R7233 R7234 R7235 R7236 R7237 R7267
EJTAG_MODE
DINT_EN
DSYSELB
PCI_SIZE[1:0]
PCI_MODE
NANDCS
EMMA2 FLASH
32Mbit
RADD[0:25]
RDATA[0:15]
V+3_4V_ACT2_UCOM
AGC1074- -PI-K
(S29GL032A90TFI04-K)
IC7202
A15 A14 A13 A12 A11 A10 A9 A8 A19 A20 WE# RESET# N.C. WP#/ACC RY/BY# A18 A17 A7 A6 A5 A4 A3 A2 A1
A16 BYTE# VSS DQ15/A-1 DQ7 DQ14 DQ6 DQ13 DQ5 DQ12 DQ4 VCC DQ11 DQ3 DQ10 DQ2 DQ9 DQ1 DQ8 DQ0 OE# VSS CE# A0
RADD16 RADD15 RADD14 RADD13 RADD12 RADD11 RADD10 RADD9 RADD20 RADD21 RADD22 RADD19 RADD18 RADD8 RADD7 RADD6 RADD5 RADD4 RADD3 RADD2 RADD1 RADD17
R7232 0
R7240 0 NO USE
C7223 0.1/10
R7272 R7273 R7274 R7275 100 1/32W
BYTE#
0-BYTE MODE
(DQ0-7 ACTIVE)
R7241 100
R7242 100
14-B5, 23-D4
FOEB
23-D4
FCSB0
GND
V+2_5V_ACT
V+2_5V_ACT_UCOM_DDR
L7201
BTX1042- -T
C7225 10/10 DCH1201- -T
C7204 22/10 BCG1059- -T

MAIN ASS'Y (EU_HD, AUS) (24/24)
EMMA2_MEMORY BLOCK

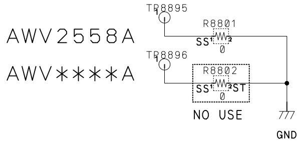
AWV2556-
AWV2557-
AWV2588-

7.25 CARD ASSY (1/7) [BOARD_IF BLOCK]

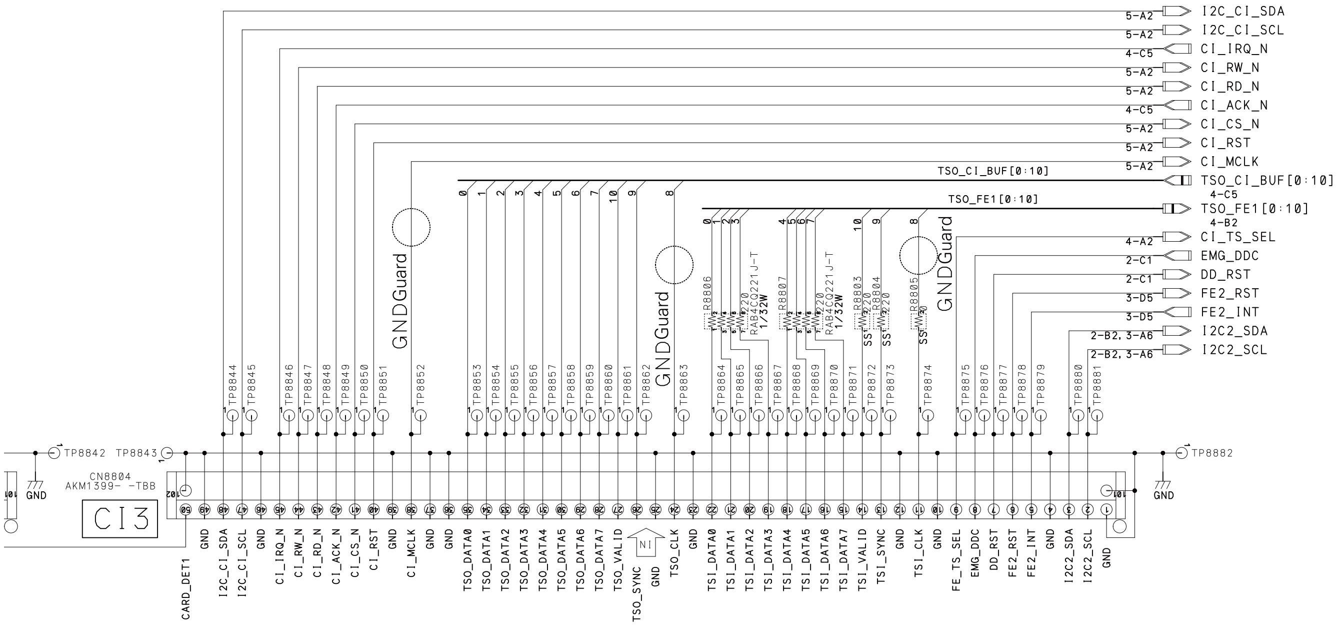

from MAIN Ass'y
CI1
CN8801
KM200NA9L
V+6_5V
V+12V
V+5_1V_D
V+1_2V_D
V+2_6V_D
GND
TP8883
TP8887
TP8888
TP8889
TP8890
TP8894
TP8892
TP8893
TP8891
TP8884
TP8885
TP8886


from/to MAIN
CI_B_VS1 4-B5
CI_A_VS1 4-C5
CI_SLOT_A[0:15] 5-A6
CI_SLOT_D[0:7] 5-A6
CI_A_FAULT_B 2-A6
CI_A_EN 2-A5, 5-C1
CI_B_FAULT_B 2-B6
CI_B_EN 2-B5, 5-D1
SPI_MISO
SPI_MOSI
SPI_SCK
SPI_SS1B
SPI_SS0B
DIR_INT
DIR_RST
ADSP_INT
ADSP_RST
SPDIF_DTV_CI 7-C4
TP8801 – TP8841
TP8805
TP8842
TP8843
CN8803
AKM1399- -TBB
CI2
CN8804
AKM1399- -TBB
CI3
NI
GND
CARD_DET2
CI_D[0] – CI_D[7]
CI_A[0] – CI_A[15]

ITEM	USED	VACANT
R	8801-8807	8802
CN	8801, 8803, 8804	


AWV2558A
AWV∗∗∗∗A
TP8895
TP8896
R8801
R8802
SS
ST
0
NO USE
GND

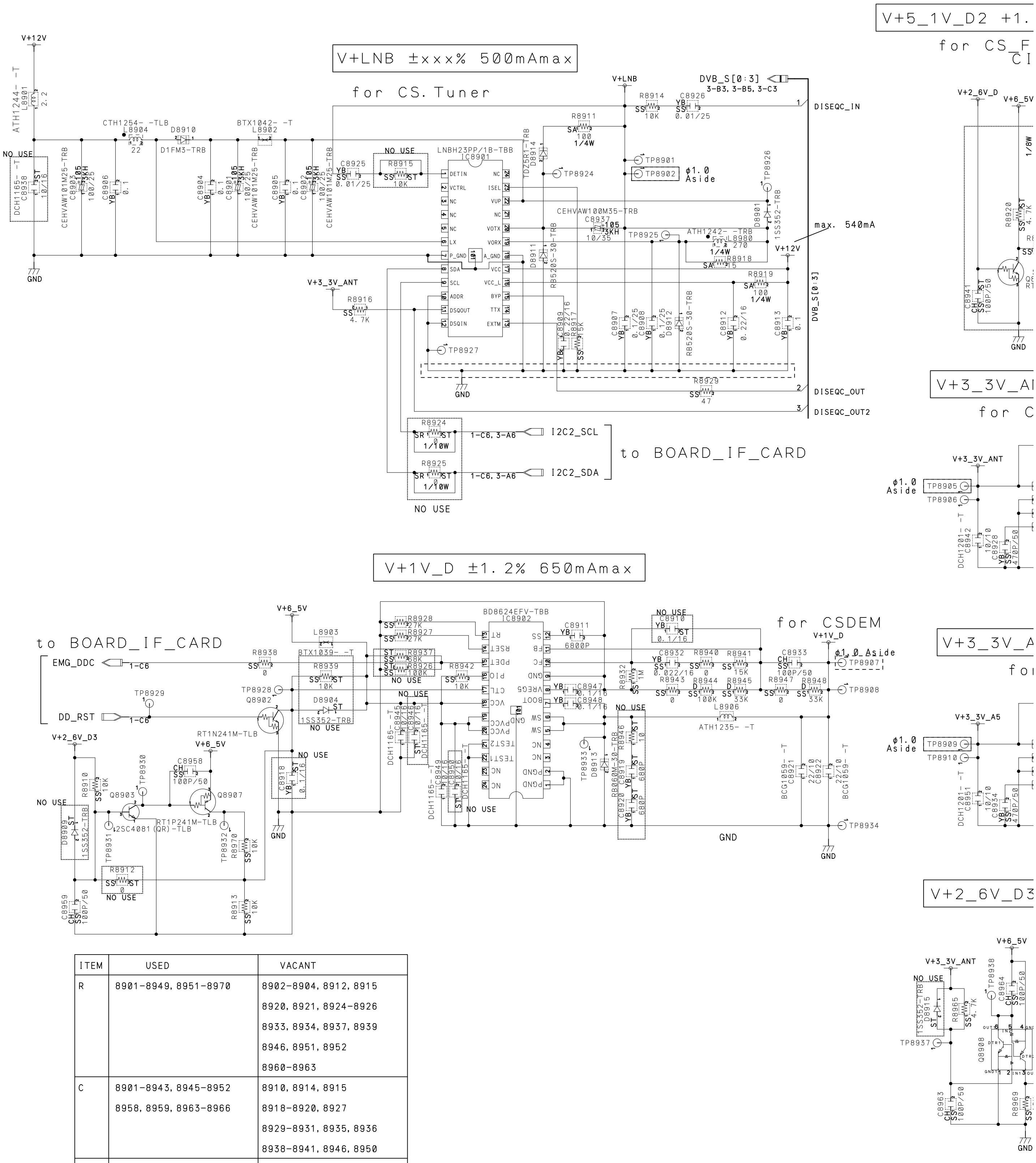
’to MAIN Ass’y


I2C_CI_SDA
I2C_CI_SCL
CI_IRQ_N
CI_RW_N
CI_RD_N
CI_ACK_N
CI_CS_N
CI_RST
CI_MCLK
TSO_CI_BUF[0:10]
4-C5
TSO_FE1[0:10]
4-B2
CI_TS_SEL
EMG_DDC
DD_RST
FE2_RST
FE2_INT
I2C2_SDA
I2C2_SCL
5-A2
4-C5
4-A2
2-C1
3-D5
2-B2, 3-A6
GNDGuard
R8806
R8807
R8803
R8804
R8805
RAB4CQ221J-T
220
1/32W
SS
TP8842
TP8843
TP8844
TP8845
TP8846
TP8847
TP8848
TP8849
TP8850
TP8851
TP8852
TP8853
TP8854
TP8855
TP8856
TP8857
TP8858
TP8859
TP8860
TP8861
TP8862
TP8863
TP8864
TP8865
TP8866
TP8867
TP8868
TP8869
TP8870
TP8871
TP8872
TP8873
TP8874
TP8875
TP8876
TP8877
TP8878
TP8879
TP8880
TP8881
TP8882
CN8804
AKM1399- -TBB
CI3
GND
CARD_DET1
TSO_DATA0
TSO_DATA1
TSO_DATA2
TSO_DATA3
TSO_DATA4
TSO_DATA5
TSO_DATA6
TSO_DATA7
TSO_VALID
TSO_SYNC
TSO_CLK
TSI_DATA0
TSI_DATA1
TSI_DATA2
TSI_DATA3
TSI_DATA4
TSI_DATA5
TSI_DATA6
TSI_DATA7
TSI_VALID
TSI_SYNC
TSI_CLK
FE_TS_SEL
EMG_DDC
DD_RST
FE2_RST
FE2_INT
I2C2_SDA
I2C2_SCL
NI

CI_CARD ASS'Y (EU_HD) (01/07)
BOARD_IF BLOCK

AWV2558-

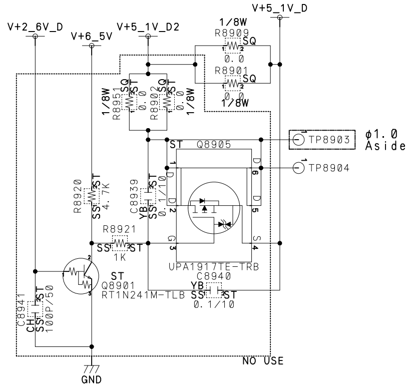
7.26 CARD ASSY (2/7) [POWER_0 BLOCK]


V+LNB ±xxx% 500mAmax
for CS.Tuner
V+12V
ATH1244- -T
L8901
CTH1254- -TLB
L8904
D8910
D1FM3-TRB
BTX1042- -T
L8902
NO USE
DCH1165- -T
C8938
CEHVAW101M25-TRB
C8925
R8915
LNBH23PP/1B-TBB
IC8901
DETIN
VCTRL
NC
LX
P_GND
SDA
SCL
ADDR
DSQOUT
DSQIN
ISEL
VUP
VOTX
VORX
A_GND
VCC
VCC_L
BYP
TTX
EXTM
TDZ5R1-TRB
D8914
R8911
TP8924
V+LNB
R8914
C8926
DVB_S[0:3]
3-B3, 3-B5, 3-C3
DISEQC_IN
TP8901
TP8902
ϕ1.0
Aside
TP8926
D8901
1SS352-TRB
CEHVAW100M35-TRB
C8937
TP8925
ATH1242- -TRB
L8980
R8918
max. 540mA
R8919
D8911
RB520S-30-TRB
D8912
C8907
C8908
C8912
C8913
C8909
R8917
V+3_3V_ANT
R8916
TP8927
GND
R8929
DISEQC_OUT
DISEQC_OUT2
R8924
R8925
1-C6, 3-A6
I2C2_SCL
I2C2_SDA
to BOARD_IF_CARD
NO USE
V+1V_D ±1.2% 650mAmax
V+6_5V
L8903
BTX1039- -T
R8928
R8927
R8937
R8926
R8939
D8904
1SS352-TRB
BD8624EFV-TBB
IC8902
RT
RSET
PDET
PIO
CTL
VCC
PVCC
TEST2
TEST1
NC
SS
FB
FC
GND
VREG5
BOOT
SW
PGND
C8911
C8947
C8948
R8942
DCH1165- -T
C8945
C8949
C8950
C8910
for CSDEM
V+1V_D
C8932
R8940
R8941
C8933
TP8907
R8943
R8944
R8945
R8947
R8948
TP8908
R8932
L8906
ATH1235- -T
TP8933
D8913
RB060M-30-TRB
R8946
C8919
C8920
BCG1059- -T
C8921
C8922
TP8934
to BOARD_IF_CARD
EMG_DDC
DD_RST
1-C6
R8938
TP8928
Q8902
RT1N241M-TLB
TP8929
V+2_6V_D3
V+6_5V
C8958
R8910
Q8903
TP8930
Q8907
2SC4081(QR)-TLB
RT1P241M-TLB
D8909
1SS352-TRB
TP8931
TP8932
R8970
C8918
R8912
C8959
R8913
V+5_1V_D2 +1.
for CS_F
CI
V+2_6V_D
V+6_5V
R8920
C8941
V+3_3V_A
for C
V+3_3V_ANT
TP8905
TP8906
DCH1201- -T
C8942
C8928
V+3_3V_A
for
V+3_3V_A5
TP8909
TP8910
C8951
C8934
V+2_6V_D3
V+6_5V
V+3_3V_ANT
D8915
TP8938
C8964
R8965
TP8937
Q8908
C8963
R8969

ITEM	USED	VACANT
R	8901-8949, 8951-8970	8902-8904, 8912, 8915 8920, 8921, 8924-8926 8933, 8934, 8937, 8939 8946, 8951, 8952 8960-8963
C	8901-8943, 8945-8952 8958, 8959, 8963-8966	8910, 8914, 8915 8918-8920, 8927 8929-8931, 8935, 8936 8938-8941, 8946, 8950
L	8901-8904, 8906, 8980	
D	8901, 8902, 8904, 8905 8909-8915	8902, 8904, 8905, 8909 8915
Q	8901-8903, 8905 8907-8913	8901, 8905
IC	8901-8904, 8907-8909	8907

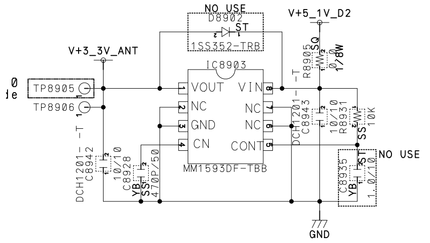
5_1V_D2 +1.7,-2.9% 1051mAmax

for CS_FE、CSDEM、
CI card、CI logic


V+2_6V_D
V+6_5V
V+5_1V_D2
V+5_1V_D
R8909
R8901
R8951
R8902
R8903
1/8W
Q8905
UPA1917TE-TRB
C8939
C8940
TP8903
TP8904
ϕ1.0
Aside
R8920
4.7K
R8921
1K
Q8901
RT1N241M-TLB
C8941
100P/50
NO USE
GND

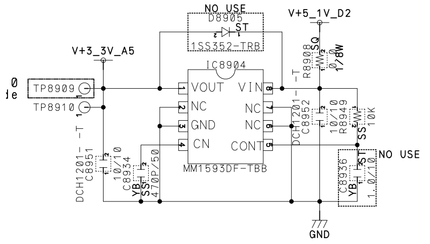
V+3_3V_ANT ±2% 195mAmax

for CS_FE、CSDEM

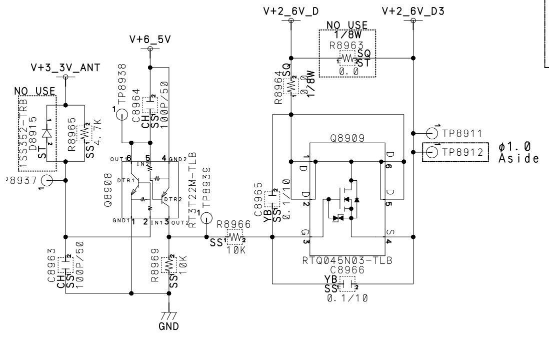

NO USE
D8902
1SS352-TRB
V+5_1V_D2
V+3_3V_ANT
IC8903
MM1593DF-TBB
VOUT
VIN
NC
GND
CN
CONT
TP8905
TP8906
R8905
C8943
R8931
10K
C8942
C8928
470P/50
C8935
NO USE
GND

V+3_3V_A5 ±2% 156mAmax

for CI,AAC

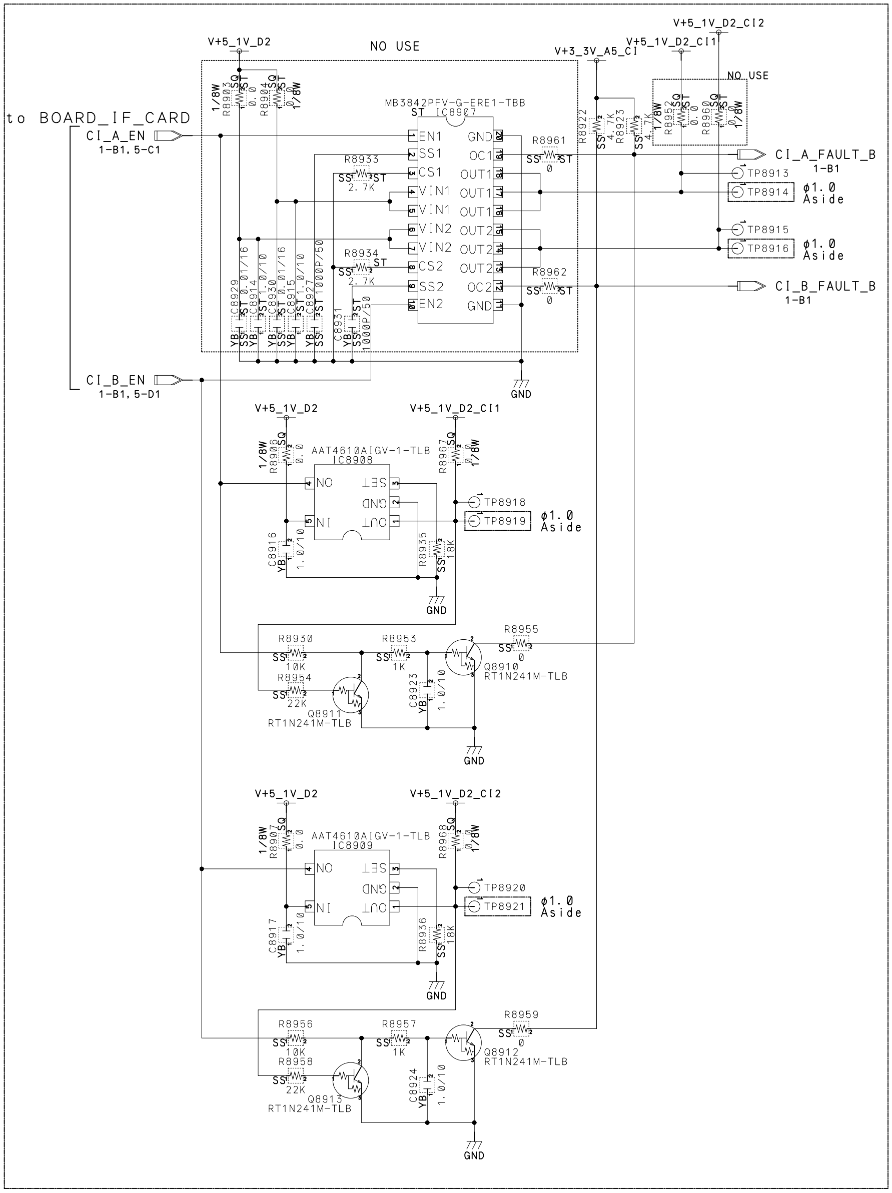

NO USE
D8905
1SS352-TRB
V+5_1V_D2
V+3_3V_A5
IC8904
MM1593DF-TBB
VOUT
VIN
NC
GND
CN
CONT
TP8909
TP8910
R8908
C8952
R8949
10K
C8951
C8934
470P/50
C8936
NO USE
GND

V+2_6V_D3 ±xxx% 130mAmax


V+2_6V_D
V+2_6V_D3
V+6_5V
V+3_3V_ANT
NO USE
D8915
1SS352-TRB
R8965
4.7K
TP8937
TP8938
C8964
100P/50
Q8908
RT3T22M-TLB
TP8939
R8966
10K
R8969
10K
C8963
100P/50
R8962
R8964
Q8909
RTQ045N03-TLB
C8965
C8966
0.1/10
TP8911
TP8912
ϕ1.0
Aside
GND

V+5_1V_D2_CI1 ±***% 300mAmax
V+5_1V_D2_CI2 ±***% 300mAmax

OCP Block

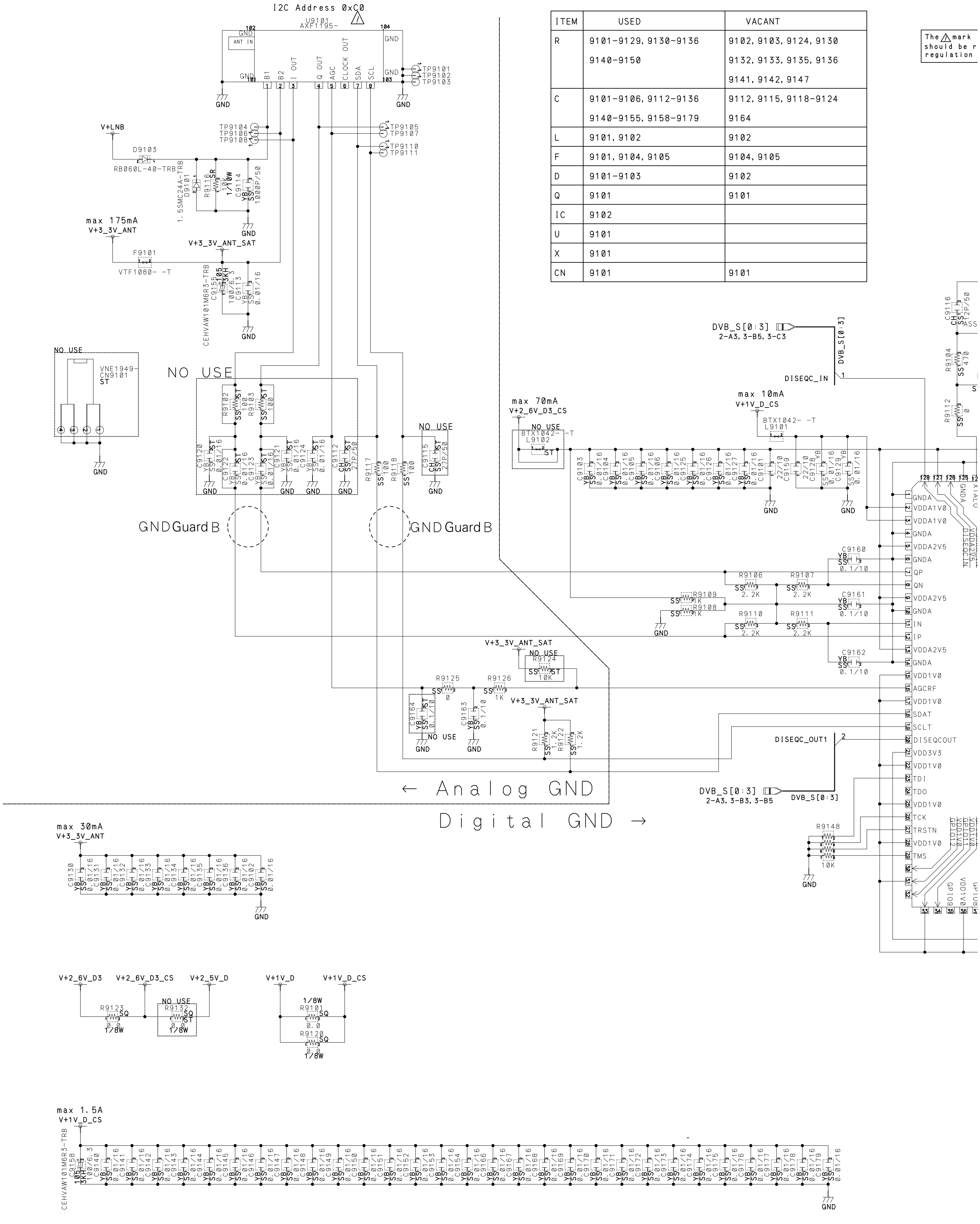

V+5_1V_D2
NO USE
V+3_3V_A5_CI
V+5_1V_D2_CI1
V+5_1V_D2_CI2
to BOARD_IF_CARD
CI_A_EN
1-B1,5-C1
CI_B_EN
1-B1,5-D1
MB3842PFV-G-ERE1-TBB
IC8907
EN1
SS1
CS1
VIN1
VIN2
CS2
SS2
EN2
GND
OC1
OUT1
OUT2
OC2
R8933
2.7K
R8934
2.7K
R8961
R8962
R8922
R8923
4.7K
R8952
R8960
C8929
C8930
C8931
C8932
1000P/50
CI_A_FAULT_B
1-B1
CI_B_FAULT_B
1-B1
TP8913
TP8914
TP8915
TP8916
ϕ1.0
Aside
AAT4610AIGV-1-TLB
IC8908
IC8909
NO
IN
SET
GND
OUT
R8906
R8967
R8907
R8968
C8916
C8917
1.0/10
R8935
R8936
18K
TP8918
TP8919
TP8920
TP8921
R8930
10K
R8953
1K
R8955
R8954
22K
Q8910
Q8911
RT1N241M-TLB
C8923
R8956
R8957
R8959
R8958
Q8912
Q8913
C8924
GND

CI_CARD ASS'Y (EU_HD) (02/07)
POWER_0 BLOCK

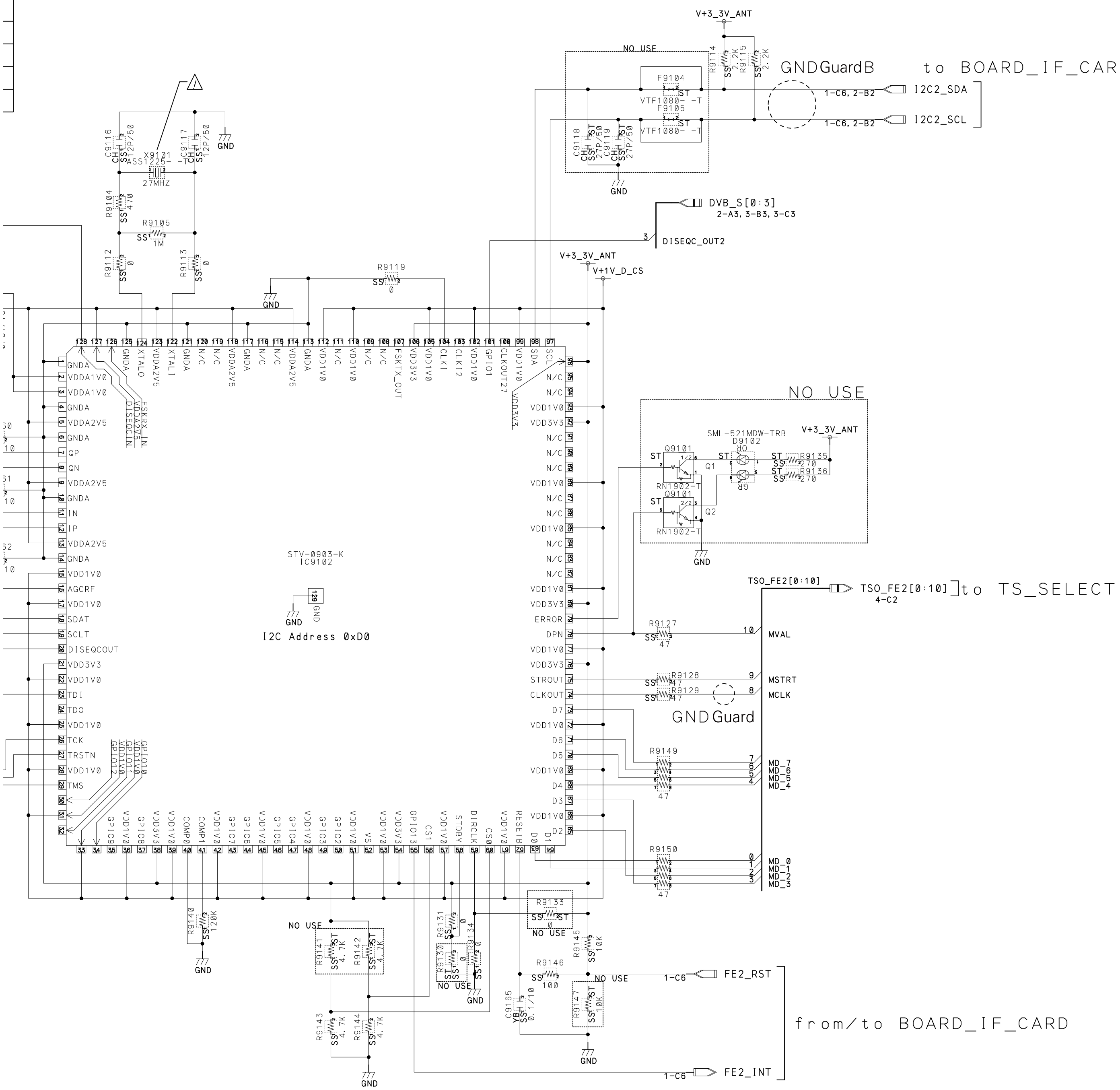
AWV2558-

7.27 CARD ASSY (3/7) [DVB-S BLOCK]

ITEM	USED	VACANT
R	9101-9129, 9130-9136 9140-9150	9102, 9103, 9124, 9130 9132, 9133, 9135, 9136 9141, 9142, 9147
C	9101-9106, 9112-9136 9140-9155, 9158-9179	9112, 9115, 9118-9124 9164
L	9101, 9102	9102
F	9101, 9104, 9105	9104, 9105
D	9101-9103	9102
Q	9101	9101
IC	9102	
U	9101	
X	9101	
CN	9101	9101


I2C Address 0xC0
U9101
AXF1195-
ANT IN
GND
B1
B2
I OUT
Q OUT
AGC
CLOCK OUT
SDA
SCL
TP9101
TP9102
TP9103
TP9104
TP9105
TP9106
TP9107
TP9108
TP9110
TP9111
V+LNB
D9103
RB060L-40-TRB
D9101
1.5SMC24A-TRB
R9116
C9114
1000P/50
max 175mA
V+3_3V_ANT
V+3_3V_ANT_SAT
F9101
VTF1080- -T
C9155
CEHVAW101M6R3-TRB
C9113
NO USE
VNE1949-
CN9101
NO USE
R9102
R9103
C9120
C9122
C9123
C9121
C9124
C9112
R9117
R9118
C9115
27P/50
GND Guard B
GND Guard B
max 70mA
V+2_6V_D3_CS
BTX1042- -T
L9102
max 10mA
V+1V_D_CS
L9101
C9103
C9104
C9105
C9106
C9125
C9126
C9127
C9101
C9159
C9128
C9129
DVB_S[0:3]
2-A3, 3-B5, 3-C3
DISEQC_IN
C9116
R9104
R9112
C9160
C9161
C9162
R9106
R9107
R9108
R9109
R9110
R9111
R9124
R9125
R9126
C9164
C9163
R9121
R9122
DISEQC_OUT1
DVB_S[0:3]
2-A3, 3-B3, 3-B5
R9148
10K
GNDA
VDDA1V0
VDDA2V5
QP
QN
IN
IP
VDD1V0
AGCRF
SDAT
SCLT
DISEQCOUT
VDD3V3
TDI
TDO
TCK
TRSTN
TMS
DISEQCIN
XIALO
← Analog GND
Digital GND →
max 30mA
V+3_3V_ANT
C9130
C9131
C9132
C9133
C9134
C9135
C9136
C9102
V+2_6V_D3
V+2_6V_D3_CS
V+2_5V_D
V+1V_D
V+1V_D_CS
R9123
R9132
R9101
R9120
1/8W
max 1.5A
V+1V_D_CS
C9158
C9140
C9179
The ⚠ mark
should be r
regulation

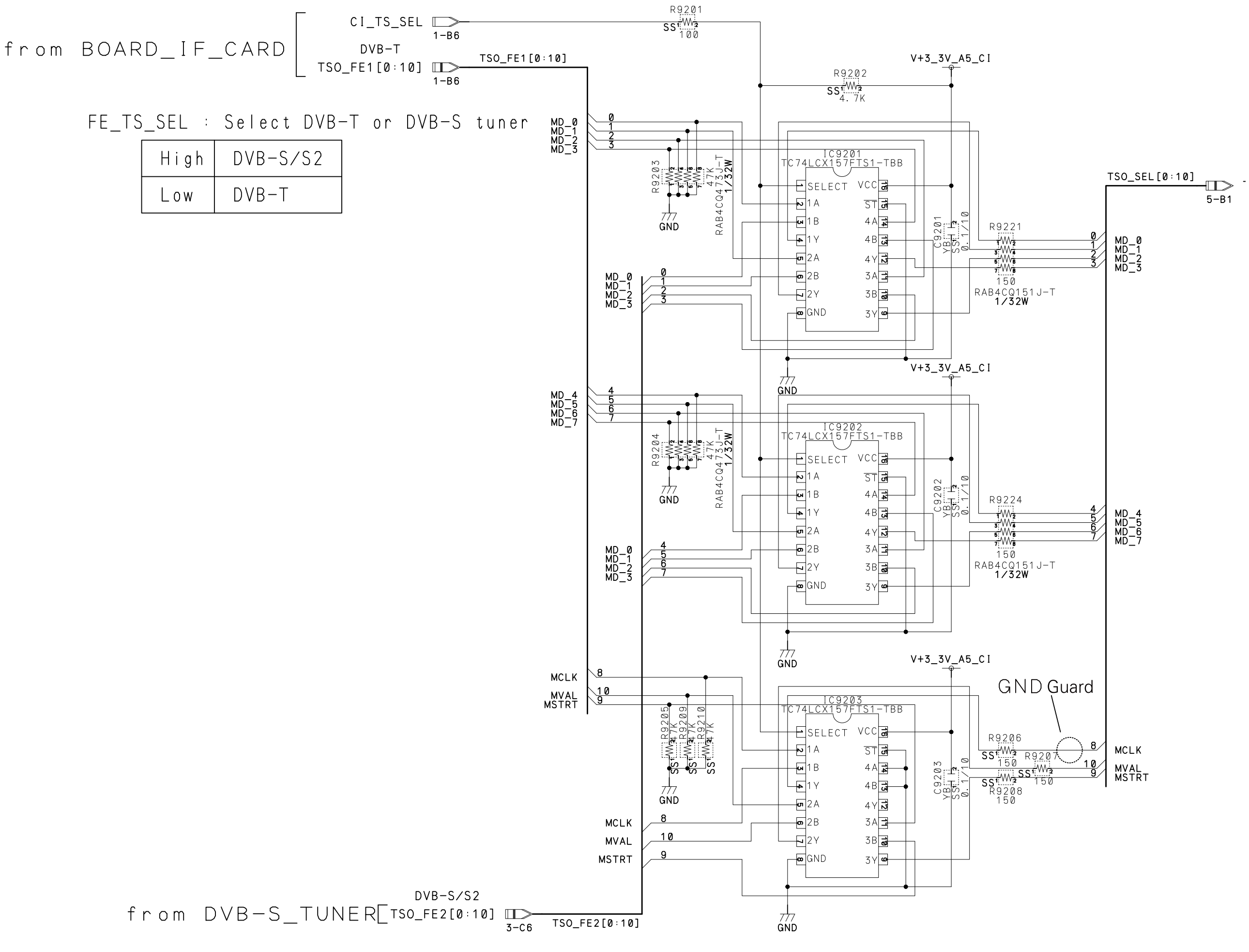
The ⚠ mark found on some component parts
should be replaced with same parts(safety
regulation authorized) of identical designation.


V+3_3V_ANT
NO USE
R9114 2.2K
R9115 2.2K
GNDGuardB
to BOARD_IF_CARD
F9104 VTF1080-T
F9105 VTF1080-T
1-C6, 2-B2
I2C2_SDA
I2C2_SCL
C9118 27P/50
C9119 27P/50
GND
X9101 ASS1225-T 27MHZ
C9116 12P/50
C9117 12P/50
R9104 470
R9105 1M
R9112 0
R9113 0
R9119 0
DVB_S[0:3]
2-A3, 3-B3, 3-C3
DISEQC_OUT2
V+1V_D_CS
STV-0903-K
IC9102
I2C Address 0xD0
NO USE
SML-521MDW-TRB
D9102
Q9101 RN1902-T
Q1
Q2
R9135 270
R9136 270
TSO_FE2[0:10]
TSO_FE2[0:10]
4-C2
to TS_SELECT
R9127 47
MVAL
R9128 47
R9129 47
MSTRT
MCLK
GND Guard
R9149 47
MD_7
MD_6
MD_5
MD_4
R9150 47
MD_0
MD_1
MD_2
MD_3
R9133 0
R9140 120K
R9141 4.7K
R9142 4.7K
R9143 4.7K
R9144 4.7K
R9131 0
R9130 0
R9134 0
R9145 10K
R9146 100
C9165 0.1/10
R9147 10K
FE2_RST
from/to BOARD_IF_CARD
FE2_INT
1-C6

CI_CARD ASS'Y (EU_HD) (03/07)
DVB-S BLOCK

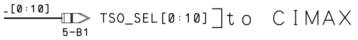
AWV2558-

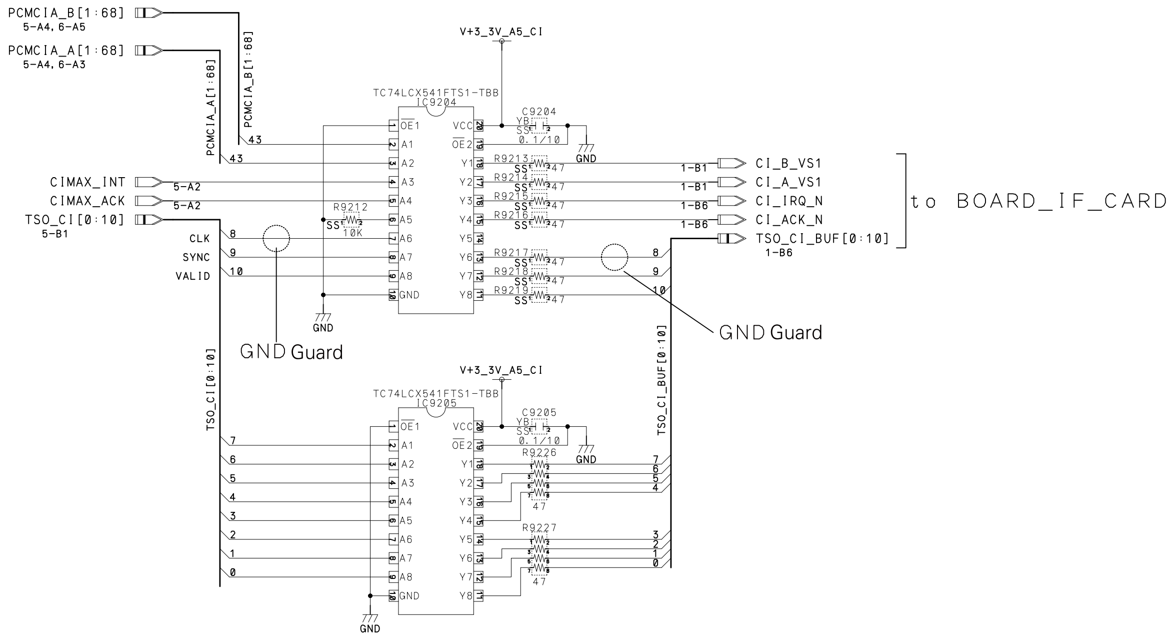
7.28 CARD ASSY (4/7) [TS_SEL. BLOCK]



from BOARD_IF_CARD
CI_TS_SEL
1-B6
DVB-T
TSO_FE1[0:10]
1-B6
FE_TS_SEL : Select DVB-T or DVB-S tuner
High DVB-S/S2
Low DVB-T
R9201 100
R9202 4.7K
V+3_3V_A5_CI
IC9201 TC74LCX157FTS1-TBB
IC9202 TC74LCX157FTS1-TBB
IC9203 TC74LCX157FTS1-TBB
SELECT VCC 1A ST 1B 4A 1Y 4B 2A 4Y 2B 3A 2Y 3B GND 3Y
R9203 RAB4CQ473J-T 47K 1/32W
R9204 RAB4CQ473J-T 47K 1/32W
R9205 47K
R9209 47K
R9210 47K
C9201 0.1/10
C9202 0.1/10
C9203 0.1/10
R9221 RAB4CQ151J-T 150 1/32W
R9224 RAB4CQ151J-T 150 1/32W
R9206 150
R9207 150
R9208 150
GND Guard
TSO_SEL[0:10]
5-B1
MD_0 MD_1 MD_2 MD_3
MD_4 MD_5 MD_6 MD_7
MCLK MVAL MSTRT
GND
DVB-S/S2
from DVB-S_TUNER
TSO_FE2[0:10]
3-C6

ITEM	USED	VACANT
R	9201-9210 9212-9219, 9221, 9224 9226, 9227	
C	9201-9205	
IC	9201-9205	


_[0:10]
5-B1
TSO_SEL[0:10]
to CIMAX

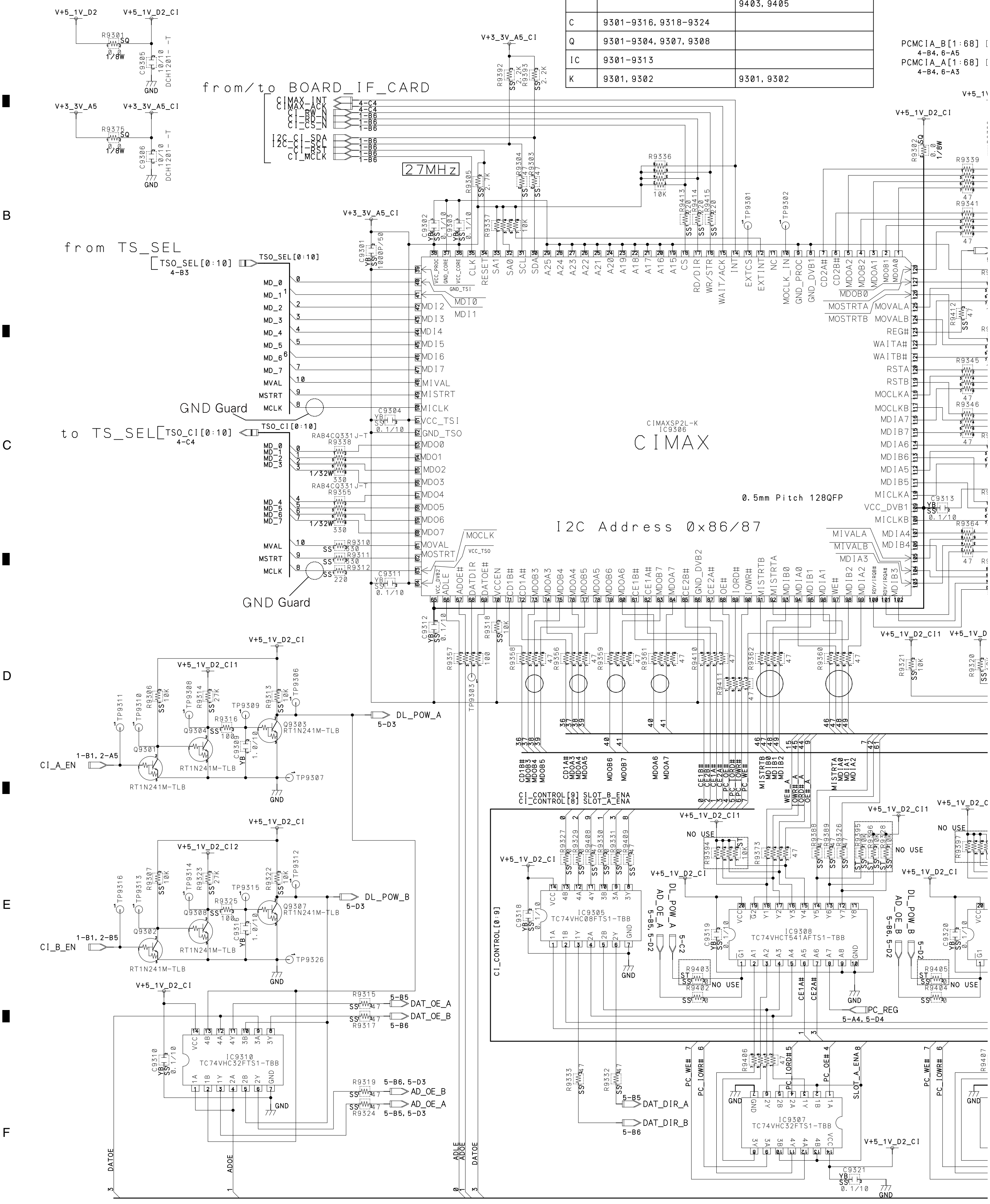

PCMCIA_B[1:68]
5-A4, 6-A5
PCMCIA_A[1:68]
5-A4, 6-A3
PCMCIA_A[1:68]
PCMCIA_B[1:68]
43
43
CIMAX_INT
5-A2
CIMAX_ACK
5-A2
TSO_CI[0:10]
5-B1
CLK
SYNC
VALID
8
9
10
V+3_3V_A5_CI
TC74LCX541FTS1-TBB
IC9204
OE1
A1
A2
A3
A4
A5
A6
A7
A8
GND
VCC
OE2
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
C9204
YB
SS
0.1/10
GND
R9212
SS
10K
R9213
R9214
R9215
R9216
R9217
R9218
R9219
SS
47
1-B1
1-B1
1-B6
1-B6
CI_B_VS1
CI_A_VS1
CI_IRQ_N
CI_ACK_N
TSO_CI_BUF[0:10]
1-B6
to BOARD_IF_CARD
GND Guard
GND Guard
GND
TSO_CI[0:10]
TSO_CI_BUF[0:10]
V+3_3V_A5_CI
TC74LCX541FTS1-TBB
IC9205
C9205
YB
SS
0.1/10
GND
R9226
47
R9227
47
7
6
5
4
3
2
1
0
GND

CI_CARD ASS'Y (EU_HD) (04/07)
TS_SEL. BLOCK

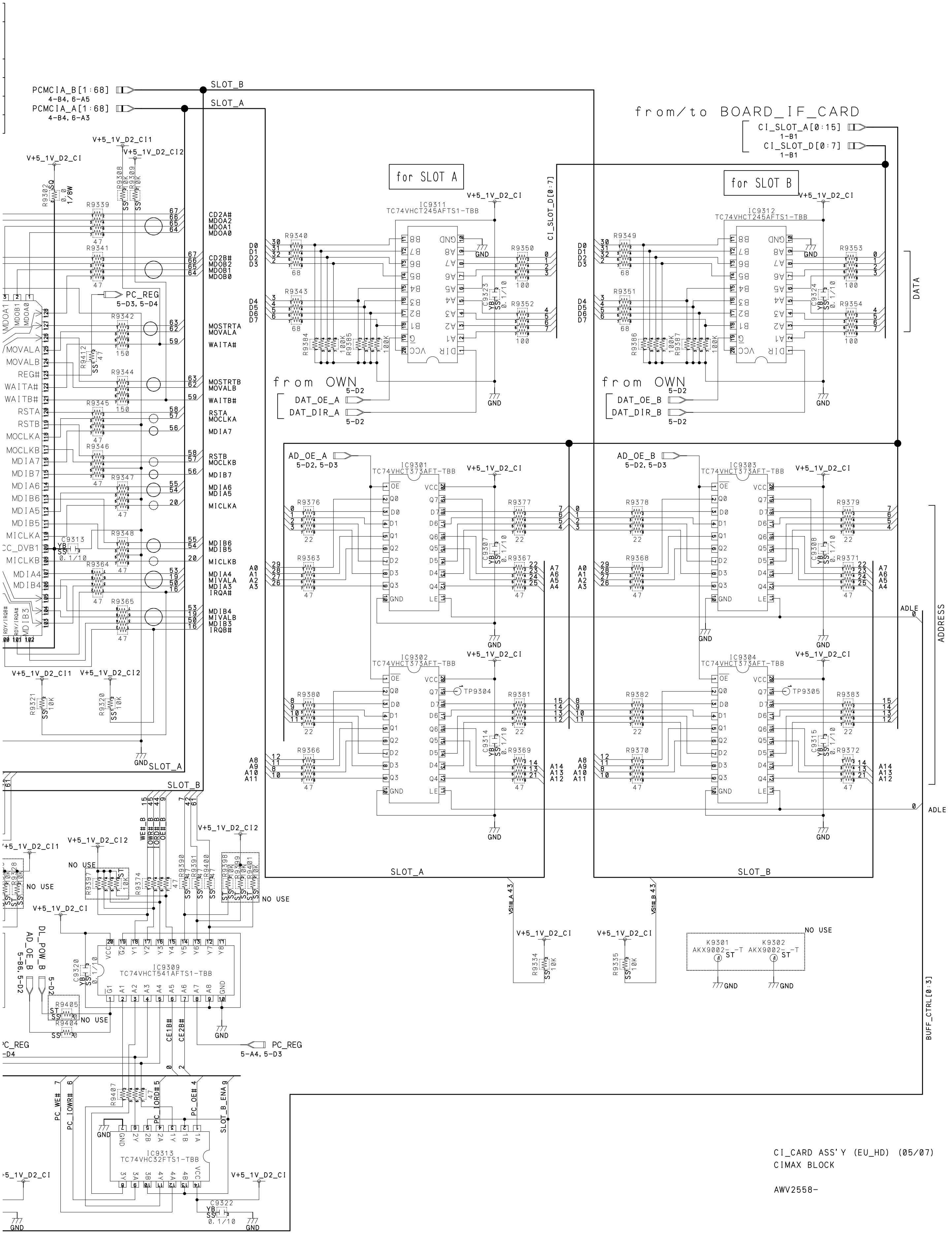
AWV2558-

7.29 CARD ASSY (5/7) [CIMAX BLOCK]

ITEM	USED	VACANT
R	9301-9415	9328, 9394-9399, 9401 9403, 9405
C	9301-9316, 9318-9324	
Q	9301-9304, 9307, 9308	
IC	9301-9313	
K	9301, 9302	9301, 9302



from/to BOARD_IF_CARD
CIMAX_INT
CIMAX_ACK
CI_RW_N
CI_RD_N
CI_CS_N
I2C_CI_SDA
I2C_CI_SCL
CI_RST
CI_MCLK
27MHz
from TS_SEL
TSO_SEL[0:10]
to TS_SEL
TSO_CI[0:10]
GND Guard
CIMAXSP2L-K
IC9306
CIMAX
0.5mm Pitch 128QFP
I2C Address 0x86/87
PCMCIA_B[1:68]
PCMCIA_A[1:68]
V+5_1V_D2
V+5_1V_D2_CI
V+3_3V_A5
V+3_3V_A5_CI
DCH1201- -T
DL_POW_A
DL_POW_B
CI_A_EN
CI_B_EN
RT1N241M-TLB
DAT_OE_A
DAT_OE_B
AD_OE_B
AD_OE_A
DAT_DIR_A
DAT_DIR_B
PC_REG
IC9310
TC74VHC32FTS1-TBB
IC9305
TC74VHC08FTS1-TBB
IC9308
TC74VHCT541AFTS1-TBB
IC9307
TC74VHC32FTS1-TBB
CI_CONTROL[9] SLOT_B_ENA
CI_CONTROL[8] SLOT_A_ENA
CI_CONTROL[0:9]
NO USE
DATOE
ADOE
ADLE
GND

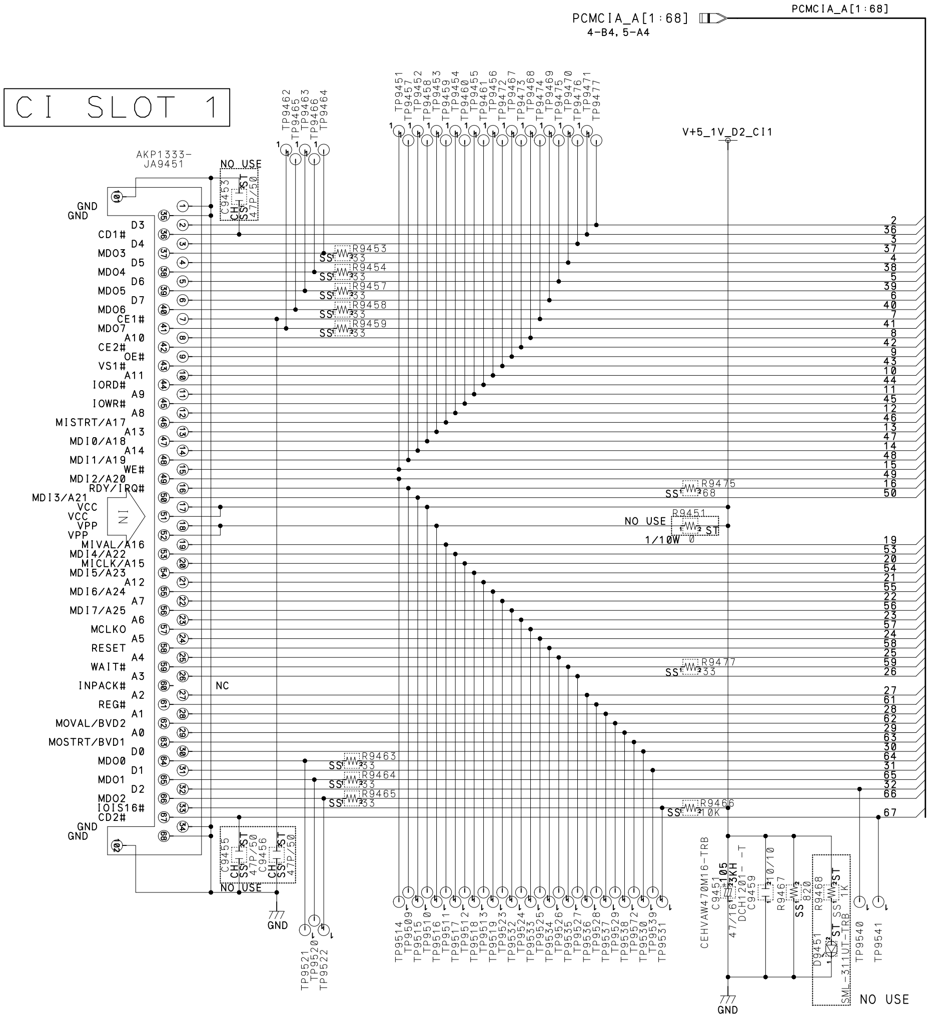

PCMCIA_B[1:68]
4-B4, 6-A5
PCMCIA_A[1:68]
4-B4, 6-A3
SLOT_B
SLOT_A
from/to BOARD_IF_CARD
CI_SLOT_A[0:15]
1-B1
CI_SLOT_D[0:7]
1-B1
for SLOT A
for SLOT B
CI_SLOT_D[0:7]
IC9311
TC74VHCT245AFTS1-TBB
IC9312
TC74VHCT245AFTS1-TBB
V+5_1V_D2_CI
V+5_1V_D2_CI1
V+5_1V_D2_CI2
GND
DATA
ADDRESS
from OWN
DAT_OE_A
DAT_DIR_A
DAT_OE_B
DAT_DIR_B
5-D2
AD_OE_A
AD_OE_B
5-D2, 5-D3
IC9301
TC74VHCT373AFT-TBB
IC9302
TC74VHCT373AFT-TBB
IC9303
TC74VHCT373AFT-TBB
IC9304
TC74VHCT373AFT-TBB
TP9304
TP9305
ADLE
PC_REG
5-D3, 5-D4
5-A4, 5-D3
CD2A#
MDOA2
MDOA1
MDOA0
CD2B#
MDOB2
MDOB1
MDOB0
MOSTRTA
MOVALA
WAITA#
MOSTRTB
MOVALB
WAITB#
RSTA
MOCLKA
MDIA7
RSTB
MOCLKB
MDIB7
MDIA6
MDIA5
MICLKA
MDIB6
MDIB5
MICLKB
MDIA4
MIVALA
MDIA3
IRQA#
MDIB4
MIVALB
MDIB3
IRQB#
IC9309
TC74VHCT541AFTS1-TBB
IC9313
TC74VHC32FTS1-TBB
CE1B#
CE2B#
PC_WE#
PC_IOWR#
PC_IORD#
PC_OE#
SLOT_B_ENA
DL_POW_B
AD_OE_B
5-B6, 5-D2
NO USE
K9301
K9302
AKX9002-_-T
VS1#_A 43
VS1#_B 43
BUFF_CTRL[0:3]
R9302
R9308
R9309
R9339
R9341
R9342
R9344
R9345
R9346
R9347
R9348
R9364
R9365
R9340
R9343
R9349
R9351
R9350
R9352
R9353
R9354
R9384
R9385
R9386
R9387
R9376
R9377
R9378
R9379
R9363
R9367
R9368
R9371
R9380
R9381
R9382
R9383
R9366
R9369
R9370
R9372
R9321
R9320
R9334
R9335
R9337
R9374
R9390
R9391
R9400
R9398
R9399
R9401
R9405
R9404
R9407
R9412
C9313
C9323
C9324
C9307
C9308
C9314
C9315
C9320
C9322
0.1/10
1/8W
47
68
100
100K
10K
22
150

CI_CARD ASS'Y (EU_HD) (05/07)
CIMAX BLOCK

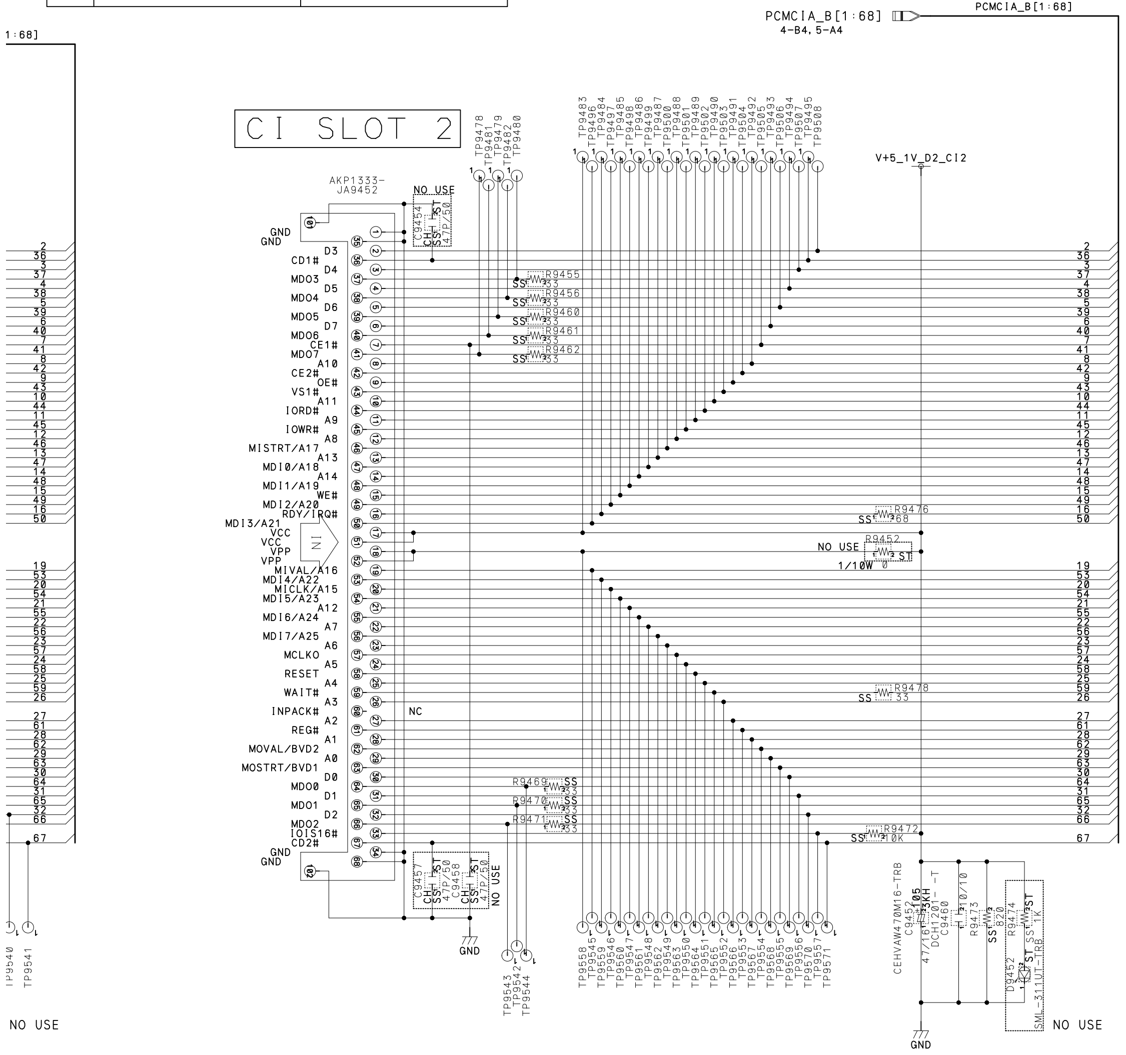
AWV2558-

7.30 CARD ASSY (6/7) [CI_SLOT BLOCK]

ITEM	USED
R	9451-9478
C	9451-9460
D	9451, 9452
JA	9451, 9452


PCMCIA_A[1:68]
4-B4, 5-A4
PCMCIA_A[1:68]
CI SLOT 1
AKP1333-
JA9451
NO USE
C9453
CH
SS ST
47P/50
V+5_1V_D2_CI1
GND
D3
CD1#
D4
MDO3
D5
MDO4
D6
MDO5
D7
MDO6
CE1#
MDO7
A10
CE2#
OE#
VS1#
A11
IORD#
A9
IOWR#
A8
MISTRT/A17
A13
MDI0/A18
A14
MDI1/A19
WE#
MDI2/A20
RDY/IRQ#
MDI3/A21
VCC
VPP
MIVAL/A16
MDI4/A22
MICLK/A15
MDI5/A23
A12
MDI6/A24
A7
MDI7/A25
A6
MCLKO
A5
RESET
A4
WAIT#
A3
INPACK#
A2
REG#
A1
MOVAL/BVD2
A0
MOSTRT/BVD1
D0
MDO0
D1
MDO1
D2
MDO2
IOIS16#
CD2#
NC
R9453 33
R9454 33
R9457 33
R9458 33
R9459 33
R9475 68
R9451 0 1/10W NO USE
R9477 33
R9463 33
R9464 33
R9465 33
R9466 10K
C9455 CH SS ST 47P/50
C9456 CH SS ST 47P/50
NO USE
CEHVAW470M16-TRB
C9451 47/16
L9451 DCH1201-T
C9459 0.1 10/10
R9467 820
R9468 1K
D9451 SML-311UT-TRB
NO USE
TP9462 TP9465 TP9463 TP9466 TP9464
TP9451 TP9457 TP9452 TP9458 TP9453 TP9459 TP9454 TP9460 TP9455 TP9461 TP9456 TP9472 TP9467 TP9473 TP9468 TP9474 TP9469 TP9475 TP9470 TP9476 TP9471 TP9477
TP9521 TP9520 TP9522
TP9514 TP9509 TP9515 TP9510 TP9516 TP9511 TP9517 TP9512 TP9518 TP9513 TP9519 TP9523 TP9532 TP9524 TP9533 TP9525 TP9534 TP9526 TP9535 TP9527 TP9528 TP9537 TP9529 TP9538 TP9530 TP9539 TP9531
TP9540 TP9541
GND

ITEM	USED	VACANT
R	9451-9478	9451, 9452, 9468, 9474
C	9451-9460	9453-9458
D	9451, 9452	9451, 9452
JA	9451, 9452	

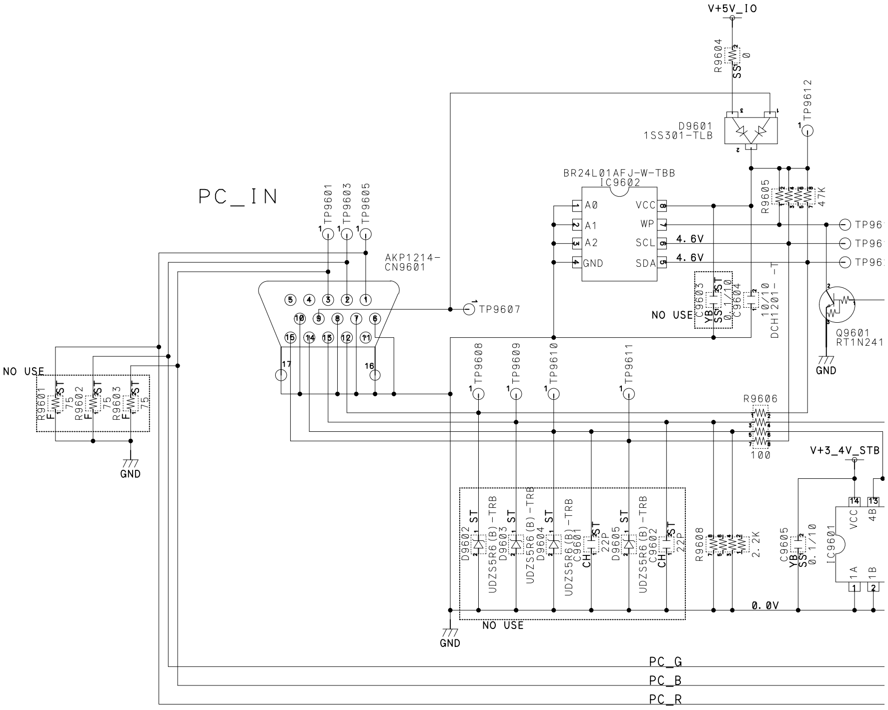


PCMCIA_B[1:68]
4-B4, 5-A4
PCMCIA_B[1:68]
1:68]
CI SLOT 2
AKP1333-
JA9452
NO USE
C9454
CH
SS
ST
47P/50
V+5_1V_D2_CI2
GND
D3
CD1#
D4
MDO3
D5
MDO4
D6
MDO5
D7
MDO6
CE1#
MDO7
A10
CE2#
OE#
VS1#
A11
IORD#
A9
IOWR#
A8
MISTRT/A17
A13
MDI0/A18
A14
MDI1/A19
WE#
MDI2/A20
RDY/IRQ#
MDI3/A21
VCC
VPP
MIVAL/A16
MDI4/A22
MICLK/A15
MDI5/A23
A12
MDI6/A24
A7
MDI7/A25
A6
MCLKO
A5
RESET
A4
WAIT#
A3
INPACK#
A2
REG#
A1
MOVAL/BVD2
A0
MOSTRT/BVD1
D0
MDO0
D1
MDO1
D2
MDO2
IOIS16#
CD2#
NC
R9455 33
R9456 33
R9460 33
R9461 33
R9462 33
R9476 68
R9452 NO USE 1/10W 0
R9478 33
R9469 33
R9470 33
R9471 33
R9472 10K
C9457 CH SS ST 47P/50
C9458 CH SS ST 47P/50
NO USE
C9452 CEHVAW470M16-TRB 47/16
C9460 DCH1201- -T
R9473 820
R9474 1K
D9452 SML-311UT-TRB
NO USE
TP9540
TP9541
NO USE
TP9543
TP9542
TP9544
GND

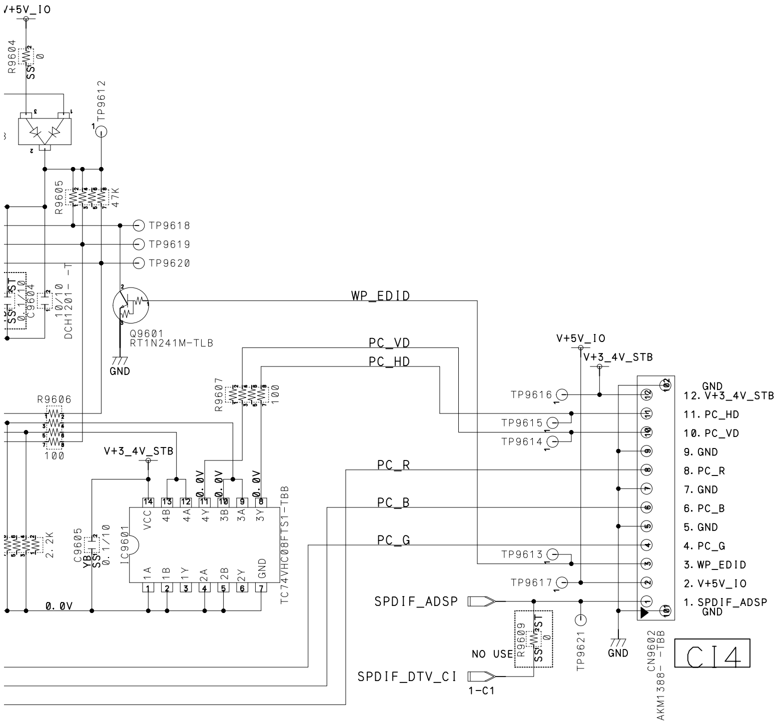
CI_CARD ASS'Y (EU_HD) (06/07)
CI_SLOT BLOCK

AWV2558-

7.31 CARD ASSY (7/7) [PC BLOCK]


PC_IN
TP9601
TP9603
TP9605
AKP1214-
CN9601
5 4 3 2 1
10 9 8 7 6
15 14 13 12 11
17
16
TP9607
NO USE
R9601 F W ST 75
R9602 F W ST 75
R9603 F W ST 75
GND
V+5V_IO
R9604 SS 0
D9601
1SS301-TLB
TP9612
BR24L01AFJ-W-TBB
IC9602
A0
A1
A2
GND
VCC
WP
SCL
SDA
4.6V
4.6V
R9605
47K
TP96
TP96
TP96
NO USE
C9603 YB SS ST 0.1/10
C9604
10/10
DCH1201- -T
Q9601
RT1N241
GND
TP9608
TP9609
TP9610
TP9611
R9606
100
V+3_4V_STB
D9602 ST UDZS5R6(B)-TRB
D9603 ST UDZS5R6(B)-TRB
D9604 ST UDZS5R6(B)-TRB
C9601 CH ST 22P
D9605 ST UDZS5R6(B)-TRB
C9602 CH ST 22P
NO USE
GND
R9608
2.2K
0.0V
C9605 YB SS 0.1/10
IC9601
VCC
4B
1A
1B
14
13
1
2
PC_G
PC_B
PC_R

ITEM	USED	VACANT
R	9601-9609	9601-9603, 9609
C	9601-9605	9601-9603
D	9601-9605	9602-9605
Q	9601	
IC	9601, 9602	
CN	9601, 9602	


V+5V_IO
R9604
TP9612
R9605
47K
TP9618
TP9619
TP9620
C9604
10/10
DCH1201- -T
WP_EDID
Q9601
RT1N241M-TLB
GND
PC_VD
PC_HD
R9606
100
R9607
100
V+3_4V_STB
IC9601
TC74VHC08FTS1-TBB
VCC 4B 4A 4Y 3B 3A 3Y
1A 1B 1Y 2A 2B 2Y GND
0.0V
C9605
0.1/10
2.2K
PC_R
PC_B
PC_G
SPDIF_ADSP
SPDIF_DTV_CI
1-C1
NO USE
R9609
TP9616
TP9615
TP9614
TP9613
TP9617
TP9621
CN9602
AKM1388- -TBB
GND
12. V+3_4V_STB
11. PC_HD
10. PC_VD
9. GND
8. PC_R
7. GND
6. PC_B
5. GND
4. PC_G
3. WP_EDID
2. V+5V_IO
1. SPDIF_ADSP
GND
CI4

CI_CARD ASS'Y (EU_HD) (07/07)
PC BLOCK

AWV2558-

7.32 VOLTAGES

MTB MAIN Assy **DIGITAL Assy**

M1 CN4105 (AKM1398- -TBB)		Voltage (V)	D12 CN3202 (AKM1398- -TBB)	
NO.	Name		Name	No.
1	MODE_C	0	MODE_C	40
2	GND	0	GND	39
3	GND	0	GND	38
4	GND	0	GND	37
5	B0_ODD	0 / 2.6	B0_ODD	36
6	B1_ODD	0 / 2.6	B1_ODD	35
7	B2_ODD	0 / 2.6	B2_ODD	34
8	B3_ODD	0 / 2.6	B3_ODD	33
9	B4_ODD	0 / 2.6	B4_ODD	32
10	B5_ODD	0 / 2.6	B5_ODD	31
11	B6_ODD	0 / 2.6	B6_ODD	30
12	B7_ODD	0 / 2.6	B7_ODD	29
13	B8_ODD	0 / 2.6	B8_ODD	28
14	B9_ODD	0 / 2.6	B9_ODD	27
15	GND	0	GND	26
16	G0_ODD	0 / 2.6	G0_ODD	25
17	G1_ODD	0 / 2.6	G1_ODD	24
18	G2_ODD	0 / 2.6	G2_ODD	23
19	G3_ODD	0 / 2.6	G3_ODD	22
20	G4_ODD	0 / 2.6	G4_ODD	21
21	G5_ODD	0 / 2.6	G5_ODD	20
22	G6_ODD	0 / 2.6	G6_ODD	19
23	G7_ODD	0 / 2.6	G7_ODD	18
24	G8_ODD	0 / 2.6	G8_ODD	17
25	G9_ODD	0 / 2.6	G9_ODD	16
26	GND	0	GND	15
27	R0_ODD	0 / 2.6	R0_ODD	14
28	R1_ODD	0 / 2.6	R1_ODD	13
29	R2_ODD	0 / 2.6	R2_ODD	12
30	R3_ODD	0 / 2.6	R3_ODD	11
31	R4_ODD	0 / 2.6	R4_ODD	10
32	R5_ODD	0 / 2.6	R5_ODD	9
33	R6_ODD	0 / 2.6	R6_ODD	8
34	R7_ODD	0 / 2.6	R7_ODD	7
35	R8_ODD	0 / 2.6	R8_ODD	6
36	R9_ODD	0 / 2.6	R9_ODD	5
37	GND	0	GND	4
38	GND	0	GND	3
39	SQ_SEL	0	SQ_SEL	2
40	MODE_B	0	MODE_B	1

MTB MAIN Assy **DIGITAL Assy**

M4 CN4101 (AKM1399- -TBB)		Voltage (V)	D11 CN3201 (AKM1399- -TBB)	
NO.	Name		Name	No.
1	MODE_A	0	MODE_A	50
2	GND	0	GND	49
3	B0_EVN	0 / 2.6	B0_EVN	48
4	B1_EVN	0 / 2.6	B1_EVN	47
5	B2_EVN	0 / 2.6	B2_EVN	46
6	B3_EVN	0 / 2.6	B3_EVN	45
7	B4_EVN	0 / 2.6	B4_EVN	44
8	B5_EVN	0 / 2.6	B5_EVN	43
9	B6_EVN	0 / 2.6	B6_EVN	42
10	B7_EVN	0 / 2.6	B7_EVN	41
11	B8_EVN	0 / 2.6	B8_EVN	40
12	B9_EVN	0 / 2.6	B9_EVN	39
13	GND	0	GND	38
14	G0_EVN	0 / 2.6	G0_EVN	37
15	G1_EVN	0 / 2.6	G1_EVN	36
16	G2_EVN	0 / 2.6	G2_EVN	35
17	G3_EVN	0 / 2.6	G3_EVN	34
18	G4_EVN	0 / 2.6	G4_EVN	33
19	G5_EVN	0 / 2.6	G5_EVN	32
20	G6_EVN	0 / 2.6	G6_EVN	31
21	G7_EVN	0 / 2.6	G7_EVN	30
22	G8_EVN	0 / 2.6	G8_EVN	29
23	G9_EVN	0 / 2.6	G9_EVN	28
24	GND	0	GND	27
25	R0_EVN	0 / 2.6	R0_EVN	26
26	R1_EVN	0 / 2.6	R1_EVN	25
27	R2_EVN	0 / 2.6	R2_EVN	24
28	R3_EVN	0 / 2.6	R3_EVN	23
29	R4_EVN	0 / 2.6	R4_EVN	22
30	R5_EVN	0 / 2.6	R5_EVN	21
31	R6_EVN	0 / 2.6	R6_EVN	20
32	R7_EVN	0 / 2.6	R7_EVN	19
33	R8_EVN	0 / 2.6	R8_EVN	18
34	R9_EVN	0 / 2.6	R9_EVN	17
35	GND	0	GND	16
36	CLK	0 / 2.6	CLK	15
37	GND	0	GND	14
38	DE	0 / 2.6	DE	13
39	HD	0 / 2.6	HD	12
40	VD	0 / 2.6	VD	11
41	THEATER	0	THEATER	10
42	GND	0	GND	9
43	TXD_MD	0 / 3.3	TXD_MD	8
44	RXD_MD	0 / 3.3	RXD_MD	7
45	REQ_MD	0	REQ_MD	6
46	RELAY2	3.3	RELAY2	5
47	ARIA_OE	3.1	MULTI_OE	4
48	GND	0	GND	3
49	NC	0	NC	2
50	V+3_4V_ACT2	3.4	V+3_4V_ACT2	1

MTB MAIN Assy **POWER SPPLY UNIT**

M2 CN4207 (KM200NA14)		Voltage (V)	P7 ---- (B14B-PH-K-S)	
NO.	Name		Name	No.
1	AC_DET	3.3	AC_DET	1
2	GND	0	GND_D	2
3	V+17V	17	V+17V	3
4	GND	0	GND_D	4
5	GND	0	GND_D	5
6	V+3_4V_STB	3.4	V+3.4V_STB	6
7	V+3_4V_STB	3.4	V+3.4V_STB	7
8	V+3_4V_STB	3.4	V+3.4V_STB	8
9	V+3_4V_STB	3.4	V+3.4V_STB	9
10	V+3_4V_STB	3.4	V+3.4V_STB	10
11	GND	0	GND_D	11
12	GND	0	GND_D	12
13	NC(Relay)	0	NC	13
14	M_SW_DET	3.3	M_SW_DET	14

MTB MAIN Assy **POWER SPPLY UNIT**

M3 CN4210 (KM200NA15)		Voltage (V)	P6 ---- (B15B-PH-K-S)	
NO.	Name		Name	No.
1	V+5_1V_STB	5.1	V+5.1V_STB	1
2	GND	0	GND_D	2
3	GND	0	GND_D	3
4	GND	0	GND_D	4
5	GND	0	GND_D	5
6	GND	0	GND_D	6
7	V+6_5V	6.5	V+6.5V	7
8	V+6_5V	6.5	V+6.5V	8
9	V+6_5V	6.5	V+6.5V	9
10	V+6_5V	6.5	V+6.5V	10
11	V+6_5V	6.5	V+6.5V	11
12	V+6_5V	6.5	V+6.5V	12
13	GND	0	GND_D	13
14	V+12V	12	V+12V	14
15	V+12V	12	V+12V	15

MTB MAIN Assy **FAN CONNECT Assy**

M5 CN4202 (KM200NA4)		Voltage (V)	FA1 CN8761 (KM200NA4)	
NO.	Name		Name	No.
1	FAN_VCC2	0.3		1
2	FAN_VCC1	0.3		2
3	GND	0		3
4	FAN_NG2	3.3		4

MTB MAIN Assy **USB CABLE**

M6 CN4107 (AKM1276- -TBB)		Voltage (V)	J301 ---- (----)	
NO.	Name		Name	No.
1	VBUS	5.1	VBUS	1
2	D-	0	D-	2
3	D+	0	D+	3
4	GND	0	GND	4
5	SHELD	0	SHELD	4

MTB MAIN Assy **SIDE KEY Assy**

M11 CN4209 (KM200NA10)		Voltage (V)	SW1 CN8701 (AKM1431-)	
NO.	Name		Name	No.
1	LED-			
2	LED_ON			
3	LED_OFF			
4	LED_TIMER			
5	LED-			
6	LED-			
7	GND	0	GND	1
8	KEY2	3.4	KEY2	2
9	KEY1	3.4	KEY1	3
10	V+3_4V_STB	3.4	V+3_4V_STB	4

MTB MAIN Assy **LED Assy**

M11 CN4209 (KM200NA10)		Voltage (V)	L1 CN8721 (AKM1425- -TBB)	
NO.	Name		Name	No.
1	LED-	0	LED-	1
2	LED_ON	2.8	LED_ON	2
3	LED_OFF	0	LED_OFF	3
4	LED_TIMER	0	LED_TIMER	4
5	LED-	0	LED-	5
6	LED-	0	LED-	6
7	GND			
8	KEY2			
9	KEY1			
10	V+3_4V_STB			

MTB MAIN Assy **FAN**

M10 CN4201 (KM200NA3)		Voltage (V)	RESERVED	
NO.	Name		Name	No.
1	FAN_VCC			
2	FAN_NG1			
3	GND			

MTB MAIN Assy **IO_AUDIO Assy**

M12 CN4003 (AKM1399- -TBB)		Voltage (V)	IO3 CN7503 (AKM1399- -TBB)	
NO.	Name		Name	No.
1	GND	0	GND	50
2	HP_PLUG	0	HP_PLUG	49
3	WP_EDID	0	WP_EDID	48
4	DSUB_DET	0	DSUB_DET	47
5	AC_HP_MUTE	2.8	AC_HP_MUTE	46
6	GND	0	GND	45
7	SDA_AV	0 / 3.3	SDA_AV	44
8	SCL_AV	0 / 3.3	SCL_AV	43
9	GND	0	GND	42
10	AC_A_MUTE	0	AC_A_MUTE	41
11	RST_MSP	0	RST_MSP	40
12	OTW	2.9	OTW	39
13	A_NG_B	2.9	A_NG_B	38
14	GND	0	GND	37
15	I2S_BCLK_DTV	0 / 3.3	I2S_BCLK_DTV	36
16	GND	0	GND	35
17	I2S_LRCLK_DTV	0 / 3.3	I2S_LRCLK_DTV	34
18	I2S_SDATA_DTV	0	I2S_SDATA_DTV	33
19	GND	0	GND	32
20	GND	0	GND(I2S_BCLK_HDMI)	31
21	GND	0	GND	30
22	SPDIF_HDMI	0 / 3.1	SPDIF_HDMI	29
23	GND	0	GND(I2S_SDATA_HDMI)	28
24	GND	0	GND	27
25	SPDIF_DTV	0 / 3.1	SPDIF_DTV	26
26	GND	0	GND	25
27	EMMA_DA_GY	0 / 0.3	EMMA_DA_GY	24
28	EMMA_DA_BCB	0.7	EMMA_DA_BCB	23
29	EMMA_DA_RCR	0.7	EMMA_DA_RCR	22
30	GND	0	GND	21
31	EXT_HD	0 / 3.2	EXT_HD	20
32	EXT_VD	0 / 3.2	EXT_VD	19
33	INT_VD	0 / 3.2	INT_VD	18
34	INT_HD	0 / 3.2	INT_HD	17
35	CLP_RGB1	0 / 3.3	CLP_RGB1	16
36	CLP_RGB2	0 / 3.3	CLP_RGB2	15
37	GND	0	GND	14
38	SDA_AV5	0 / 5.0	SDA_AV5	13
39	SCL_AV5	0 / 5.0	SCL_AV5	12
40	GND	0	GND	11
41	SR_OUT	4.8	SR_OUT	10
42	TXD_SR	3.1	TXD_SR	9
43	RXD_SR	3.1	RXD_SR	8
44	GND	0	GND	7
45	TXD_232C_1	3.3	TXD_232C_1	6
46	RXD_232C_1	3.3	RXD_232C_1	5
47	NC(232C_EN_B)	0	NC(232C_EN_B)	4
48	232C_DET	3.3	232C_DET	3
49	RST4	3.3	RST4	2
50	GND(IO_DET)	0	GND(IO_DET)	1

MTB MAIN Assy **IO_AUDIO Assy**

M13 CN4004 (AKM1398- -TBB)		Voltage (V)	IO4 CN7504 (AKM13998- -TBB)	
NO.	Name		Name	No.
1	GND	0	GND	40
2	RCR_AD	1.0 / 1.7	RCR_AD	39
3	GND	0	GND	38
4	BCB_AD	1.0 / 1.7	BCB_AD	37
5	GND	0	GND	36
6	GY_AD	1.1 / 2.1	GY_AD	35
7	GND	0	GND	34
8	RCR_VDEC	1.4 / 2.1	RCR_VDEC	33
9	GND	0	GND	32
10	BCB_VDEC	1.4 / 2.1	BCB_VDEC	31
11	GND	0	GND	30
12	GY_VDEC	1.4 / 2.1	GY_VDEC	29
13	GND	0	GND	28
14	FB_VDEC	0 or 3.2	FB_VDEC	27
15	GND	0	GND	26
16	VBI_Y	1.5 / 2.7	VBI_Y	25
17	GND	0	GND	24
18	MAIN_C	1.9 / 2.4	MAIN_C	23
19	GND	0	GND	22
20	MAIN_Y	1.5 / 2.4	MAIN_Y	21
21	GND	0	GND	20
22	SUB_C	1.9 / 2.4	SUB_C	19
23	GND	0	GND	18
24	SUB_Y	1.5 / 2.4	SUB_Y	17
25	GND	0	GND	16
26	A_TUNER_V	1.3 / 2.2	A_TUNER_V	15
27	GND	0	GND	14
28	DT_MON_CVBS	2.0 / 3.0	DT_MON_CVBS	13
29	GND	0	GND	12
30	AIR_SIF	2.8 / 3.6	AIR_SIF	11
31	GND	0	GND	10
32	AC_AM_MUTE	0	AC_AM_MUTE	9
33	TEMP2	DC	TEMP2	8
34	AC_SC1_MUTE	0	AC_SC1_MUTE	7
35	LINK_IO2	4.7	LINK_IO2	6
36	AC_SC2_MUTE	0	AC_SC2_MUTE	5
37	LINK_IO3	4.7	LINK_IO3	4
38	AC_SC3_MUTE	0	AC_SC3_MUTE	3
39	NC(IR_OUT)	0	NC(IR_OUT)	2
40	GND	0	GND	1

MTB MAIN Assy IO_AUDIO Assy

M14 CN4005 (AKP1320-B)		Voltage (V)	IO1 CN7501 (AKM1377-)	
NO.	Name		Name	No.
1	V+12V	11.3	V+12V	1
2	V+8V_IO	7.9	V+8V_IO	2
3	GND	0	GND	3
4	V+3_4V_D	3.3	V+3_4V_D	4
5	V+3_4V_STB	3.3	V+3_4V_STB	5
6	GND	0	GND	6
7	V+6_5V	6.4	V+6_5V	7

MTB MAIN Assy RLS Assy

M15 CN4208 (KM200NA7)		Voltage (V)	RL1 CN8736 (AKM1422- -TBB)	
NO.	Name		Name	No.
1	GND	0	GND	1
2	RLS_L	DC	RLS_L	2
3	V+3_4V_ACT2	3.3	V+3_4V_ACT2	3
4	V+3_4V_STB			
5	REM			
6	GND			
7	NC			

MTB MAIN Assy IR Assy

M15 CN4208 (KM200NA7)		Voltage (V)	RE1 CN8751 (AKM1289- -TBB)	
NO.	Name		Name	No.
1	GND			
2	RLS_L			
3	V+3_4V_ACT2			
4	V+3_4V_STB	3.4	V+3_4V_STB	1
5	REM	0 / 3.2	REM	2
6	GND	0	GND	3
7	NC			

MTB MAIN Assy CARD Assy

M18 CN4204 (KM200NA9)		Voltage (V)	CI1 CN8801 (KM200NA9L)	
NO.	Name		Name	No.
1	V+6_5V	6.5	V+6_5V	1
2	GND	0	GND	2
3	V+12V	12.0	V+12V	3
4	GND	0	GND	4
5	V+5_1V_D	5.1	V+5_1V_D	5
6	V+5_1V_D	5.1	V+5_1V_D	6
7	GND	0	GND	7
8	V+1_2V_D	1.3	V+1_2V_D	8
9	V+2_6V_D	2.6	V+2_6V_D	9

MTB MAIN Assy **CARD Assy**

M16 CN4102 (AKM1399- -TBB)		Voltage	CI2 CN8803 (AKM1399- -TBB)	
NO.	Name	(V)	Name	No.
1	GND	0	GND	50
2	SPDIF_DTV_CI	1.5 / 1.7	SPDIF_DTV_CI	49
3	GND	0	GND	48
4	ADSP_RST	3.3	ADSP_RST	47
5	ADSP_INT	0	ADSP_INT	46
6	DIR_RST	3.3	DIR_RST	45
7	DIR_INT	0	DIR_INT	44
8	SPI_SS0B	3.3	SPI_SS0B	43
9	SPI_SS1B	3.3	SPI_SS1B	42
10	SPI_SCK	3.3	SPI_SCK	41
11	SPI_MOSI	3.3	SPI_MOSI	40
12	SPI_NISO	0	SPI_NISO	39
13	GND	0	GND	38
14	CI_B_EN	3.1	CI_B_EN	37
15	CI_B_FAULT_B	0	CI_B_FAULT_B	36
16	CI_A_EN	2.8 / 3.3	CI_A_EN	35
17	CI_A_FAULT_B	0	CI_A_FAULT_B	34
18	GND	0	GND	33
19	CI_D[0]	3.3	CI_D[0]	32
20	CI_D[1]	0	CI_D[1]	31
21	CI_D[2]	0	CI_D[2]	30
22	CI_D[3]	0	CI_D[3]	29
23	GND	0	GND	28
24	CI_D[4]	0	CI_D[4]	27
25	CI_D[5]	0	CI_D[5]	26
26	CI_D[6]	0	CI_D[6]	25
27	CI_D[7]	0	CI_D[7]	24
28	GND	0	GND	23
29	CI_A[0]	0	CI_A[0]	22
30	CI_A[1]	0	CI_A[1]	21
31	CI_A[2]	0	CI_A[2]	20
32	CI_A[3]	0	CI_A[3]	19
33	CI_A[4]	0	CI_A[4]	18
34	CI_A[5]	0	CI_A[5]	17
35	CI_A[6]	0	CI_A[6]	16
36	CI_A[7]	0	CI_A[7]	15
37	GND	0	GND	14
38	CI_A[8]	0	CI_A[8]	13
39	CI_A[9]	0	CI_A[9]	12
40	CI_A[10]	3.3	CI_A[10]	11
41	CI_A[11]	3.3	CI_A[11]	10
42	CI_A[12]	0	CI_A[12]	9
43	CI_A[13]	3.3	CI_A[13]	8
44	CI_A[14]	3.3	CI_A[14]	7
45	CI_A[15]	0	CI_A[15]	6
46	GND	0	GND	5
47	CI_A_VS1	0	CI_A_VS1	4
48	CI_B_VS1	3.3	CI_B_VS1	3
49	GND	0	GND	2
50	CARD_DET2	3.3	CARD_DET2	1

MTB MAIN Assy **CARD Assy**

M17 CN4106 (AKM1399- -TBB)		Voltage	CI3 CN8804 (AKM1399- -TBB)	
NO.	Name	(V)	Name	No.
1	CARD_DET1	0	CARD_DET1	50
2	GND	0	GND	49
3	I2C_CI_SDA	3.3	I2C_CI_SDA	48
4	I2C_CI_SCL	3.3	I2C_CI_SCL	47
5	GND	0	GND	46
6	CI_IRQ_N	3.3	CI_IRQ_N	45
7	CI_RW_N	3.3	CI_RW_N	44
8	CI_RD_N	3.3	CI_RD_N	43
9	CI_ACK_N	3.3	CI_ACK_N	42
10	CI_CS_N	3.3	CI_CS_N	41
11	CI_RST	0.1	CI_RST	40
12	GND	0	GND	39
13	CI_MCLK	0 / 3.3	CI_MCLK	38
14	GND	0	GND	37
15	GND	0	GND	36
16	TSO_DATA0	0 / 3.3	TSO_DATA0	35
17	TSO_DATA1	0 / 3.3	TSO_DATA1	34
18	TSO_DATA2	0 / 3.3	TSO_DATA2	33
19	TSO_DATA3	0 / 3.3	TSO_DATA3	32
20	TSO_DATA4	0 / 3.3	TSO_DATA4	31
21	TSO_DATA5	0 / 3.3	TSO_DATA5	30
22	TSO_DATA6	0 / 3.3	TSO_DATA6	29
23	TSO_DATA7	0 / 3.3	TSO_DATA7	28
24	TSO_VALID	0 / 3.3	TSO_VALID	27
25	TSO_SYNC	0 / 3.3	TSO_SYNC	26
26	GND	0	GND	25
27	TSO_CLK	0 / 3.3	TSO_CLK	24
28	GND	0	GND	23
29	TSI_DATA0	0 / 3.3	TSI_DATA0	22
30	TSI_DATA1	0 / 3.3	TSI_DATA1	21
31	TSI_DATA2	0 / 3.3	TSI_DATA2	20
32	TSI_DATA3	0 / 3.3	TSI_DATA3	19
33	TSI_DATA4	0 / 3.3	TSI_DATA4	18
34	TSI_DATA5	0 / 3.3	TSI_DATA5	17
35	TSI_DATA6	0 / 3.3	TSI_DATA6	16
36	TSI_DATA7	0 / 3.3	TSI_DATA7	15
37	TSI_VALID	0 / 3.3	TSI_VALID	14
38	TSI_SYNC	0 / 3.3	TSI_SYNC	13
39	GND	0	GND	12
40	TSI_CLK	0 / 3.3	TSI_CLK	11
41	GND	0	GND	10
42	FE_TS_SEL	0	FE_TS_SEL	9
43	EMG_DDC	3.8	EMG_DDC	8
44	DD_RST	0	DD_RST	7
45	FE2_RST	3.3	FE2_RST	6
46	FE2_INT	3.0	FE2_INT	5
47	GND	0	GND	4
48	I2C2_SDA	3.3	I2C2_SDA	3
49	I2C2_SCL	3.3	I2C2_SCL	2
50	GND	0	GND	1

IO_AUDIO Assy CARD Assy

IO6 CN7506 (AKM1385- -TBB)		Voltage (V)	CI4 CN9602 (AKM1388- -TBB)	
NO.	Name		Name	No.
1	V+3_4V_STB	3.4	V+3_4V_STB	12
2	PC_HD	0 / 3.4	PC_HD	11
3	PC_VD	0 / 3.4	PC_VD	10
4	GND	0	GND	9
5	PC_R	0 / 0.7	PC_R	8
6	GND	0	GND	7
7	PC_B	0 / 0.7	PC_B	6
8	GND	0	GND	5
9	PC_G	0 / 0.7	PC_G	4
10	WP_EDID	0	WP_EDID	3
11	V+5V_IO	5.0	V+5V_IO	2
12	SPDIF_ADSP	3.1	SPDIF_ADSP	1

IO_AUDIO Assy SIDE IO Assy

IO5 CN7505 (AKM1371-)		Voltage (V)	S1 CN8601 (AKM1438-)	
NO.	Name		Name	No.
1	HP_PLUG	0	HP_PLUG	1
2	GND	0	GND	2
3	SIDE_R	-0.2 / 0.2	SIDE_R	3
4	GND	0	GND	4
5	SIDE_L	-0.2 / 0.2	SIDE_L	5
6	GND	0	GND	6
7	HP_R	2.0 / 2.3	HP_R	7
8	GND	0	GND	8
9	HP_L	2.0 / 2.3	HP_L	9
10	GND	0	GND	10
11	SIDE_V	-0.3 / 0.9	SIDE_V	11

IO_AUDIO Assy POWER SUPLLY UNIT

IO2 CN7502 (B5P-VH)		Voltage (V)	P5 ---- (B5P-VH)	
NO.	Name		Name	No.
1	V+17V	17	V+17V	1
2	V+17V	17	V+17V	2
3	GND	0	GND-D	3
4	GND	0	GND-D	4
5	GND	0	GND-D	5

A

B

C

D

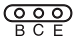
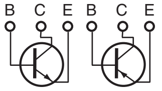
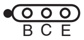
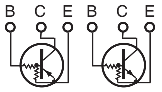
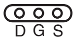
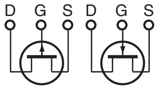
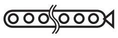
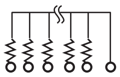
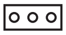
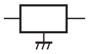
E

F

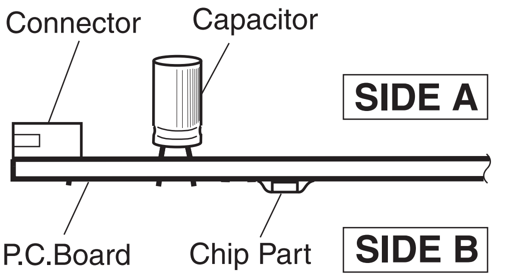
8. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

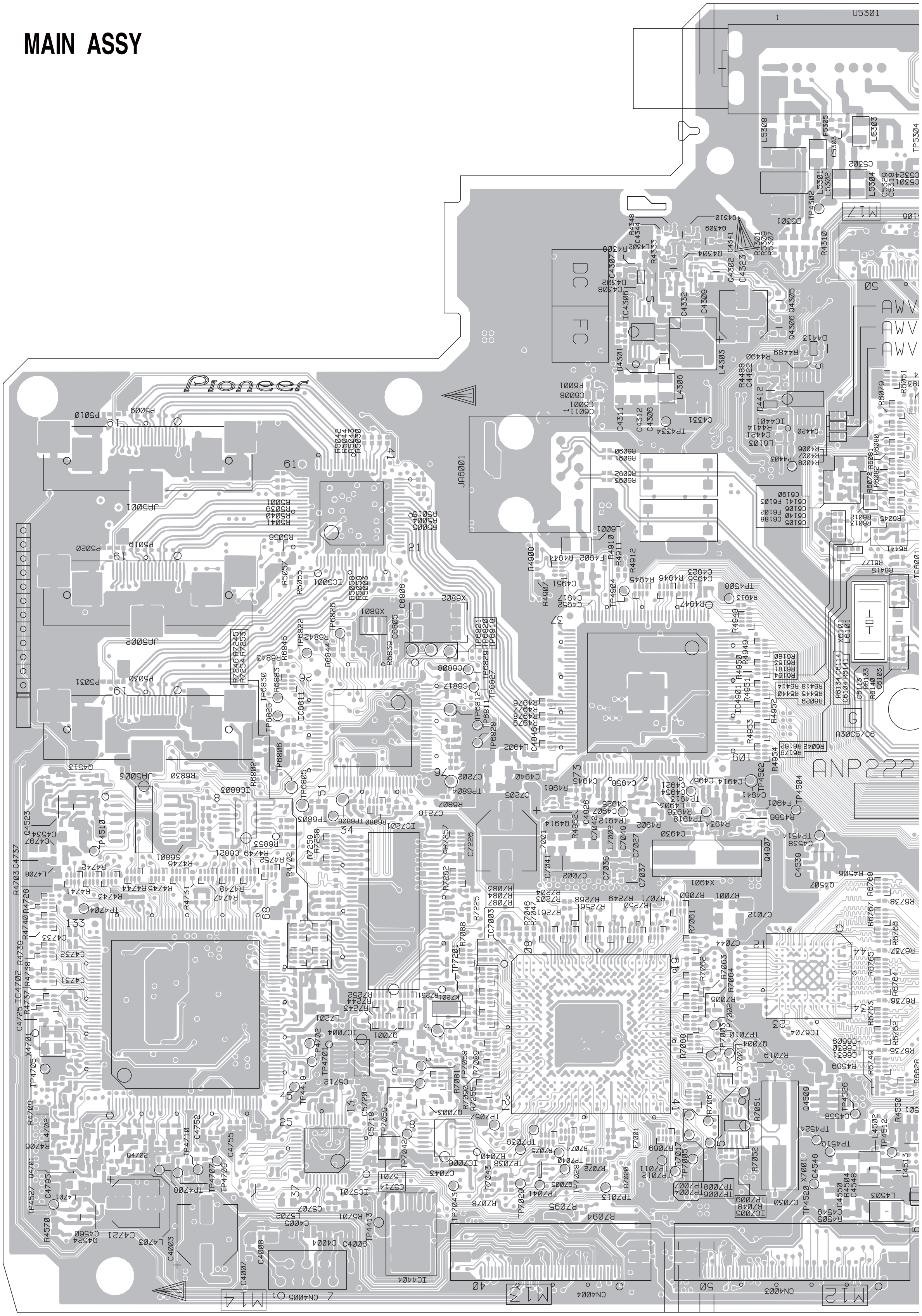
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.


Connector
Capacitor
SIDE A
P.C.Board
Chip Part
SIDE B

8.1 MAIN ASSY

SIDE A

MAIN ASSY


U5301
M17
DC
FC
Pioneer
JA6001
JA5001
JA5002
JA5003
IC5001
IC4901
IC7201
IC4702
IC6704
ANP222
M14
M13
M12
CN4005
CN4004
CN4003
IC4404
X4701
X4901
X6801

SIDE A

A

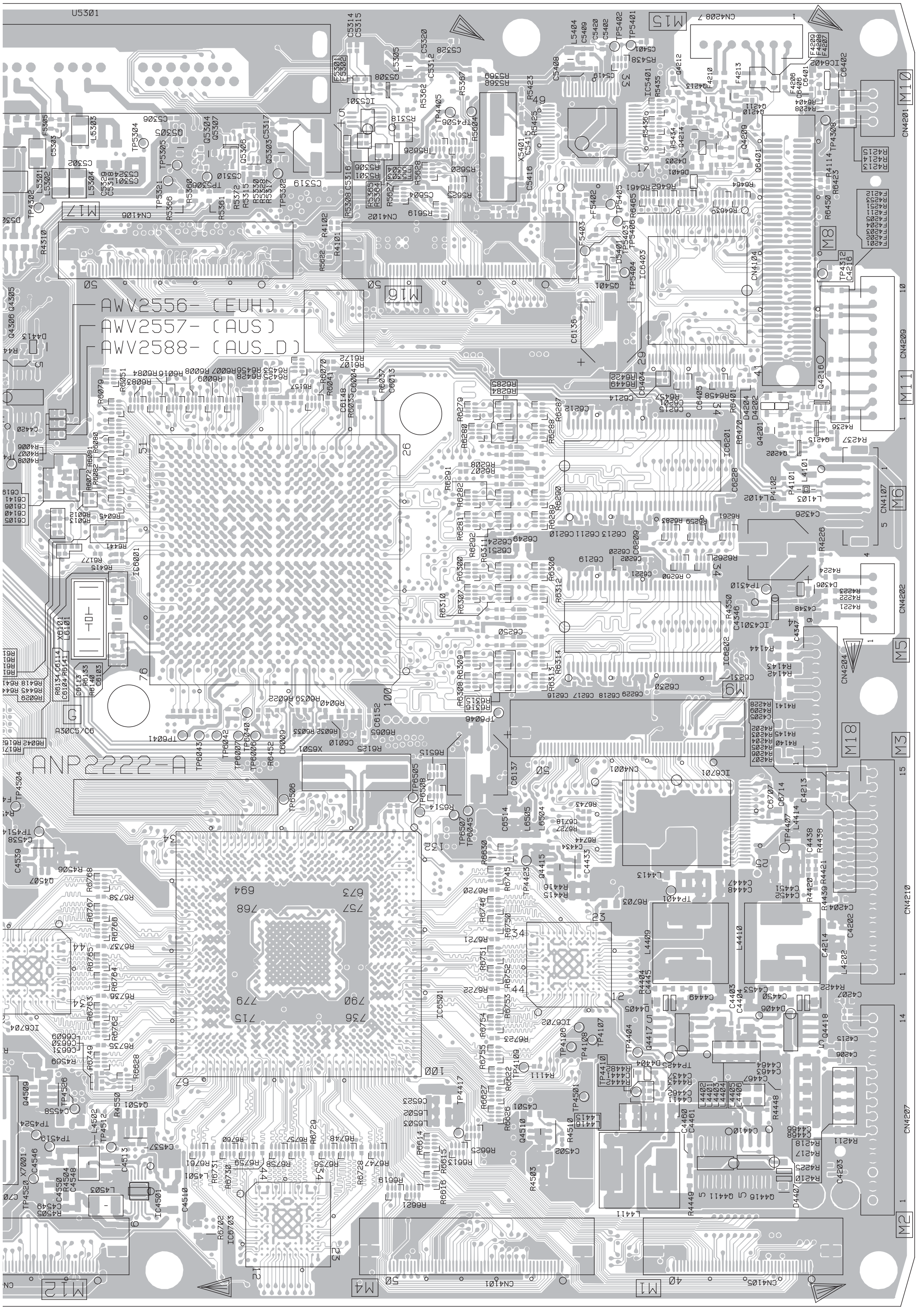
B

C

D

E

F

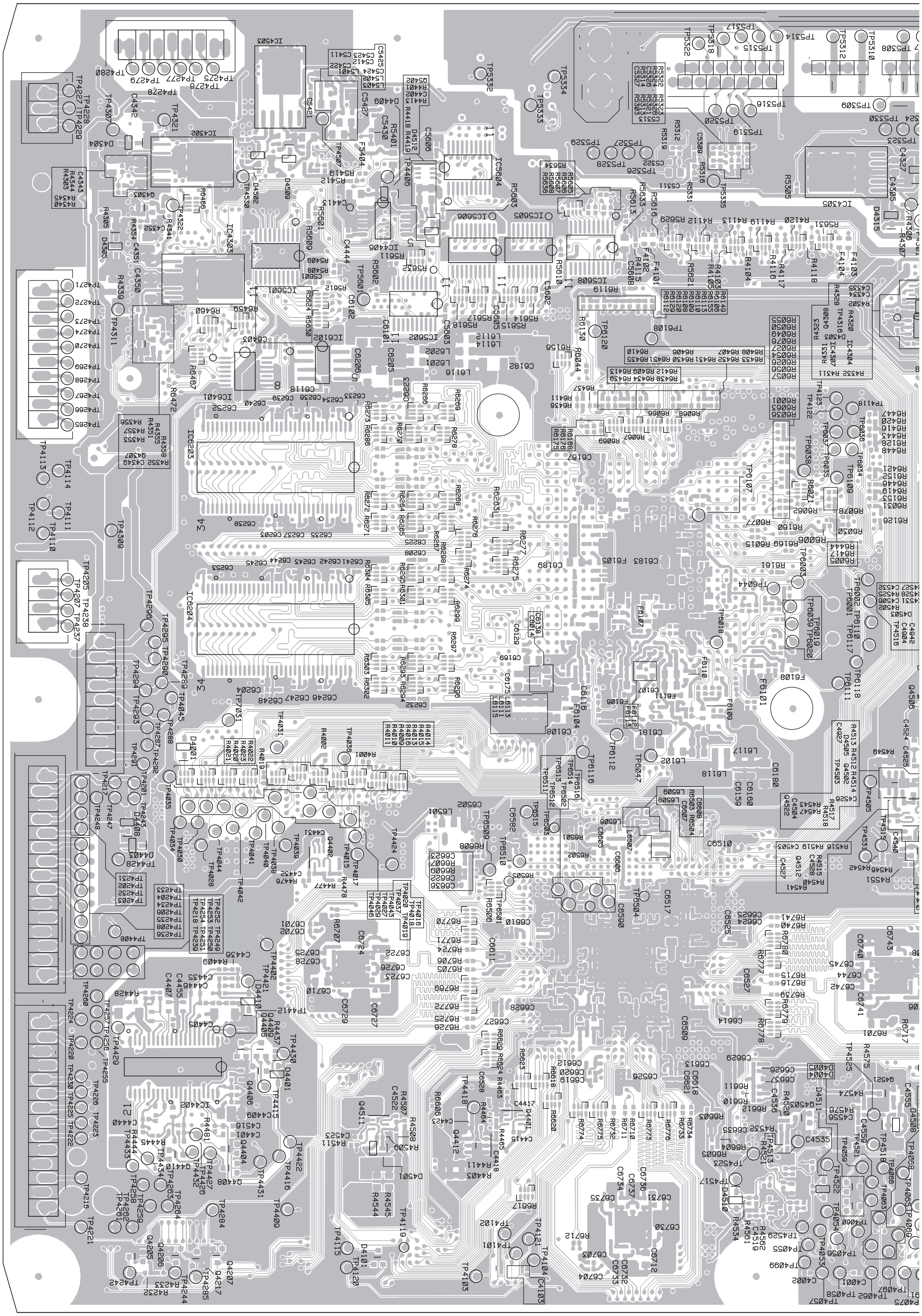

U5301
M15
M10
M17
M16
M8
M11
M6
M5
M9
M18
M3
M2
M1
M4
M12
AWV2556-(EUH)
AWV2557-(AUS)
AWV2588-(AUS_D)
ANP2222-A
IC6001
IC6201
IC6202
IC6501
IC6702
IC4501
CN4106
CN4102
CN4104
CN4201
CN4208
CN4209
CN4107
CN4202
CN4204
CN4210
CN4207
CN4101
CN4105
CN4001
X6101
X6501
X7001
G

(ANP2222-A)

A

SIDE B

MAIN ASSY



B

C

D

E

F

SIDE B

A

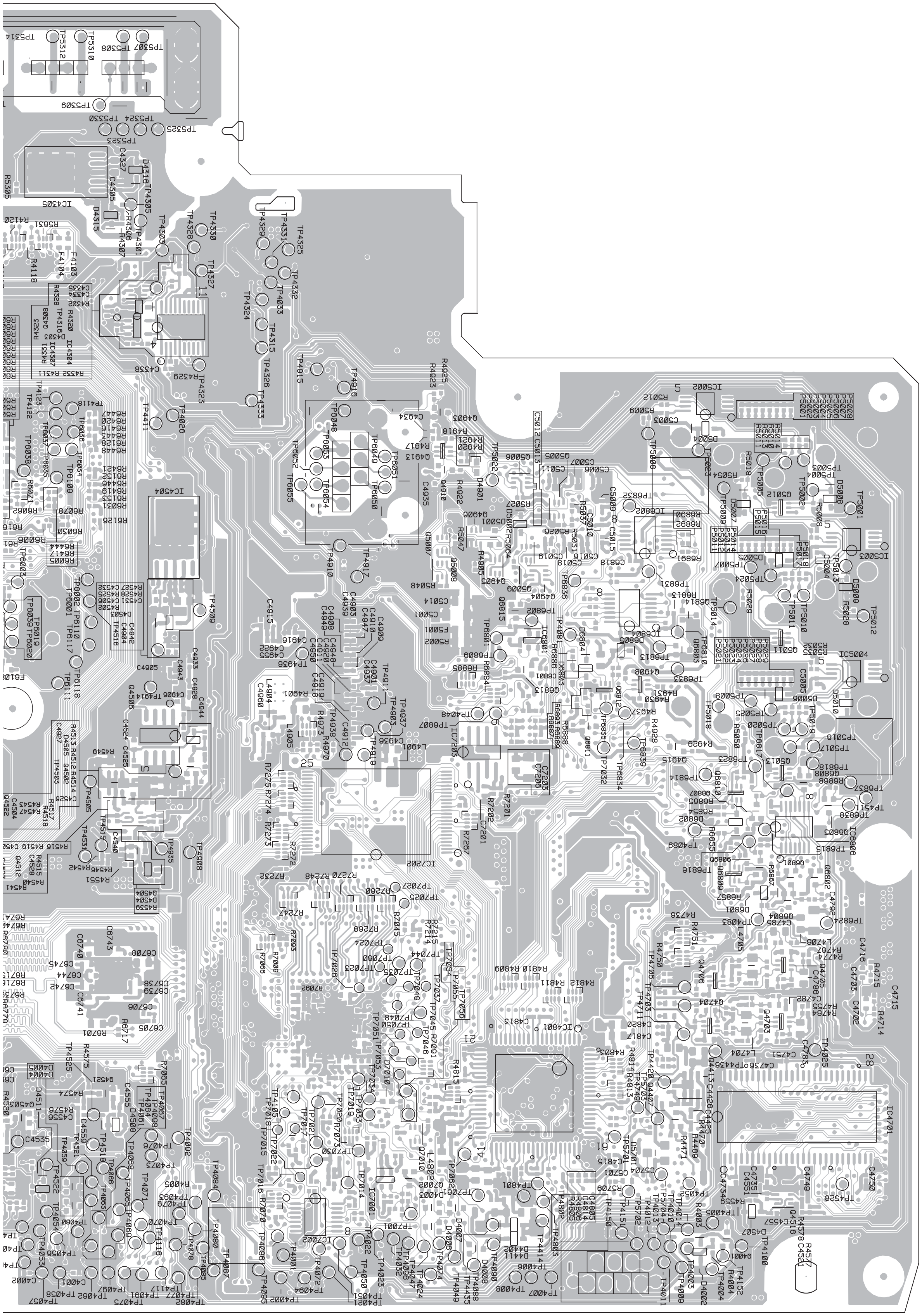
B

C

D

E

F

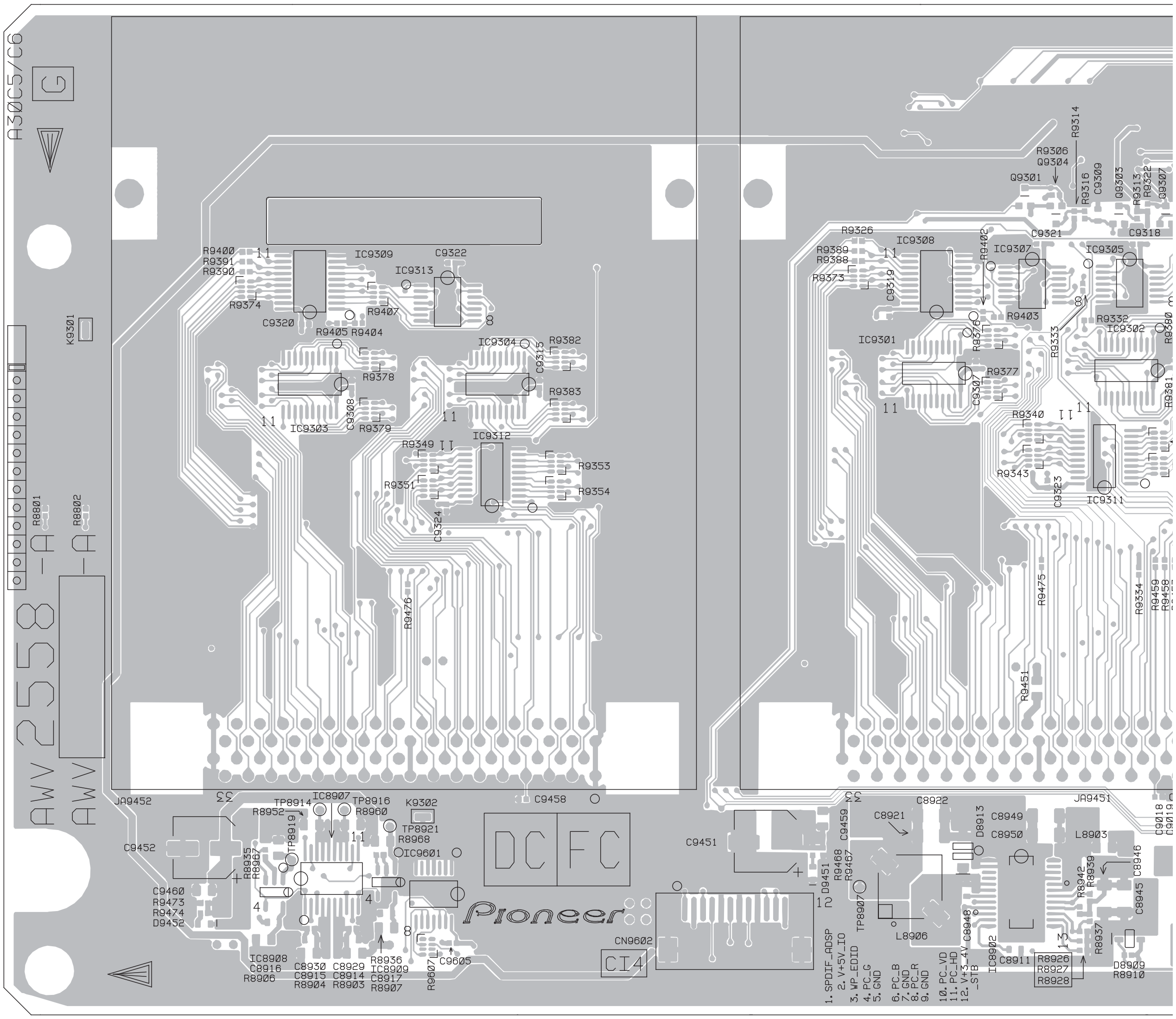


(ANP2222-A)

8.2 CARD ASSY

SIDE A

CARD ASSY



A30C5/C6
G
K9301
R8801 -A
R8802 -A
AWV 2558
AWV
R9400
R9391
R9390
IC9309
C9322
IC9313
R9374
C9320
R9407
R9405 R9404
IC9304
C9315
R9382
R9378
R9383
IC9303
C9308
R9379
R9349
IC9312
R9353
R9351
R9354
C9324
R9476
R9326
IC9308
R9389
R9388
R9373
C9319
R9402
IC9307
IC9305
C9321
C9318
Q9301
R9306
Q9304
R9314
R9316
C9309
Q9303
R9313
R9322
Q9307
R9403
R9332
IC9302
R9380
IC9301
R9376
R9333
C9307
R9377
R9381
R9340
R9343
C9323
IC9311
R9475
R9334
R9459
R9458
R9451
JA9452
TP8914
IC8907
TP8916
R8952
R8960
K9302
C9458
TP8919
TP8921
R8968
IC9601
C9452
R8935
R8967
C9460
R9473
R9474
D9452
IC8908
C8916
R8906
C8930
C8915
R8904
C8929
C8914
R8903
R8936
IC8909
C8917
R8907
R9607
C9605
DC
FC
Pioneer
CN9602
CI4
C9451
C9459
R9468
R9467
D9451
TP8907
C8921
C8922
D8913
C8949
C8950
JA9451
L8903
C9018
C9019
C8946
R8942
R8939
C8945
L8906
C8948
IC8902
C8911
R8926
R8927
R8928
R8937
D8909
R8910
1. SPDIF_ADSP
2. V+5V_IO
3. WP_EDID
4. PC_G
5. GND
6. PC_B
7. GND
8. PC_R
9. GND
10. PC_VD
11. PC_HD
12. V+3.4V_STB

SIDE A

A

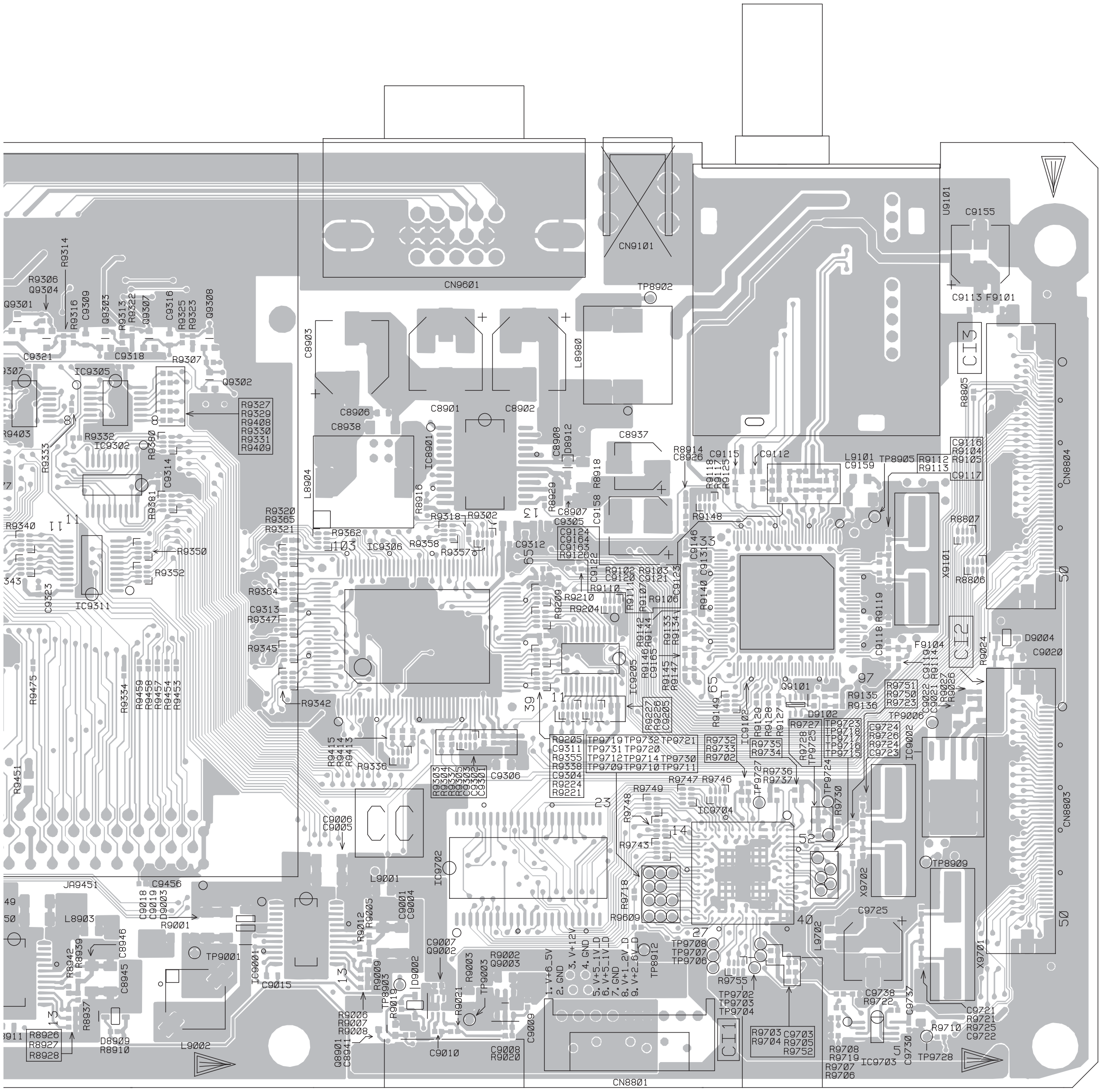
B

C

D

E

F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TP8902
U9101
C9155
C9113 F9101
CN8804
CN8803
CN8801
C8903
L8980
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C8938
C8901
C8902
IC8901
L8904
C8937
C8908
D8912
R8914
C8926
C9115
C9112
L9101
C9159
TP8905
R9112
R9113
C9116
R9104
R9105
C9117
R8805
R8807
R8806
X9101
F9104
D9004
C9020
R9024
Q9101
D9102
R9135
R9136
TP9006
IC9002
X9702
TP8909
C9725
L9702
X9701
C9738
R9722
C9737
C9721
R9721
R9725
C9722
R9710
TP9728
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R9708
R9719
R9707
R9706
R9703
R9704
C9703
R9705
R9752
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R9307
C9321
C9318
R9403
R9332
R9333
R9340
R9350
R9352
C9323
R9475
R9334
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JA9451
L8903
C9456
R9001
TP9001
IC9001
C9015
L9001
L9002
D8909
R8910
R8926
R8927
R8928
C9006
C9005
C9007
Q9002
R9002
Q9003
R9003
TP9003
TP8903
R9000
R9007
R9008
Q8901
C8941
C9010
C9008
R9020
C9009
TP8912
1.V+6.5V
2.GND
3.V+12V
4.GND
5.V+5.1V_D
6.V+5.1V_D
7.GND
8.V+1.2V_D
9.V+2.6V_D
R9609
R9718
R9743
R9748
R9749
R9747
R9746
R9755
TP9702
TP9703
TP9704
TP9708
TP9707
TP9706
R9342
R9336
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R9415
R9414
R9413
R9320
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R9321
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R9364
C9313
R9347
R9345
R9318
R9302
R9358
R9357
C9312
C9305
C8907
C9158
R8918
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R9148
C9146
C9124
C9164
C9163
R9126
R9210
R9204
R9209
R9140
R9119
C9118
R9149
R9205
C9311
R9355
R9338
C9304
R9224
R9221
R9732
R9733
R9702
R9736
R9737
R9727
R9750
R9723
R9751
C9724
R9726
R9724
C9723
CI1
CI2
CI3
39
65
97
14
23
27
40
52
50
13
11

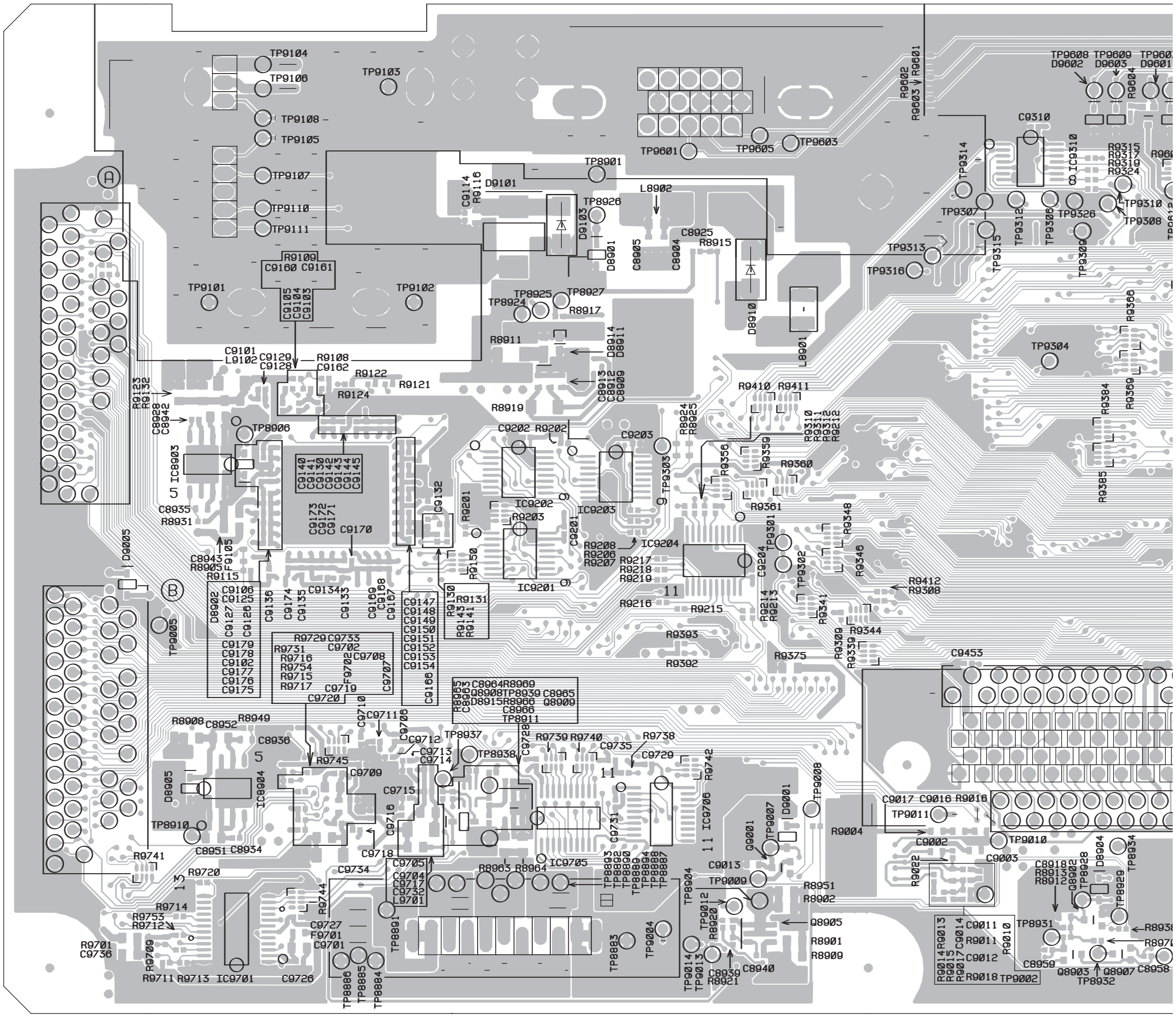
(ANP2220-A)

A

SIDE B

B

CARD ASSY



A
B
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TP9106
TP9103
TP9108
TP9105
TP9107
TP9110
TP9111
TP9101
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C9105
C9104
C9103
C9101
L9102
C9129
C9128
R9108
C9162
R9122
R9121
R9124
R9123
R9132
C8928
C8942
TP8806
IC8903
C8935
R8931
C8943
R8905
F9105
R9115
D9005
C9140
C9141
C9130
C9142
C9143
C9144
C9145
C9173
C9172
C9171
C9170
C9132
C9106
C9125
C9127
C9126
D8902
C9136
C9174
C9135
C9134
C9133
C9169
C9168
C9167
C9147
C9148
C9149
C9150
C9151
C9152
C9153
C9154
C9166
R9130
R9131
R9140
R9141
R9150
R9201
C9179
C9178
C9102
C9177
C9176
C9175
TP9005
R9729
C9733
R9731
C9702
R9716
C9708
R9754
F9702
R9715
R9717
C9719
C9707
C9720
C9710
C9711
C9706
R8908
C8952
R8949
C8936
R9745
C9712
C9713
C9714
TP8937
TP8938
C9709
C9715
C9716
C9718
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C8951
C8934
R9741
R9720
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R9753
R9712
R9701
C9736
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R9711
R9713
IC9701
C9726
R9744
C9734
C9727
F9701
C9701
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TP8885
TP8884
C9705
C9704
C9717
C9732
L9701
R8963
R8964
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C9728
R9730
R9740
C9735
R9738
C9729
R9742
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C9731
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TP8892
TP8890
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TP8888
TP8887
TP8883
TP9004
TP8904
TP9014
TP9013
TP9012
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R8921
C8939
C8940
Q9001
D9001
TP9007
TP9008
C9013
TP9009
R8951
R8902
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R9212
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R8925
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R8911
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D8911
D8913
C8912
C8909
TP8925
TP8924
TP8927
R8917
TP8901
TP8926
L8902
C9114
R9116
D9101
D9103
D8901
C8905
C8904
C8925
R8915
D8910
L8901
TP9601
TP9605
TP9603
R9602
R9603
R9601
TP9608
TP9609
TP9607
D9002
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D9601
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C9310
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R9317
R9319
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R9016
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C9003
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C9014
C9011
R9011
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C8958

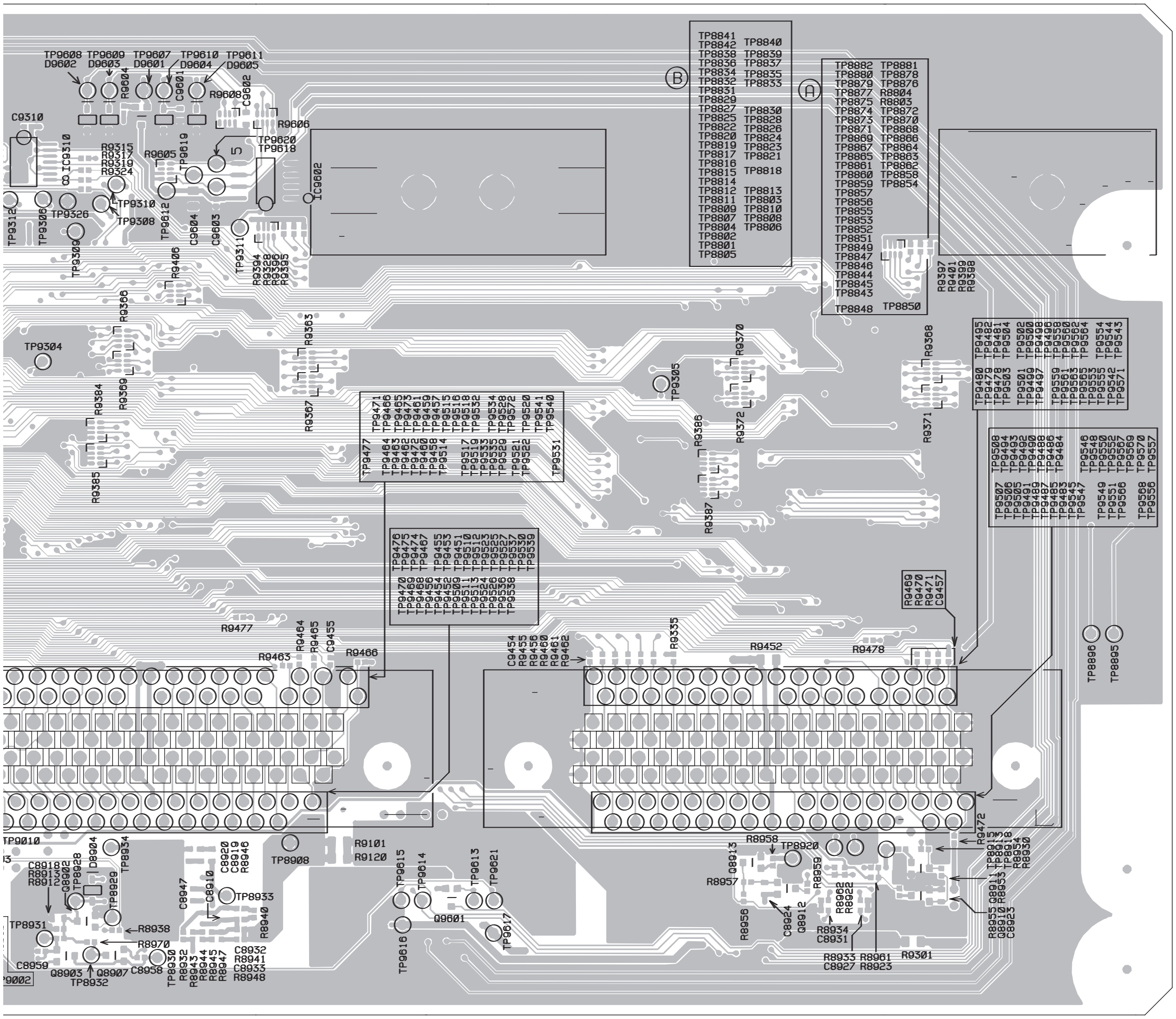
C

D

E

F

SIDE B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TP9620 TP9618 IC9602
TP9312 TP9306 TP9326 TP9310 TP9308 TP9309 TP9612 C9604 C9603 TP9311 R9394 R9393 R9396 R9395 R9406
TP8841 TP8840 TP8842 TP8839 TP8838 TP8837 TP8836 TP8835 TP8834 TP8833 TP8832 TP8831 TP8829 TP8827 TP8830 TP8825 TP8828 TP8822 TP8826 TP8820 TP8824 TP8819 TP8823 TP8817 TP8821 TP8816 TP8815 TP8818 TP8814 TP8812 TP8813 TP8811 TP8803 TP8809 TP8810 TP8807 TP8808 TP8804 TP8806 TP8802 TP8801 TP8805
B
A
TP8882 TP8881 TP8880 TP8878 TP8879 TP8876 TP8877 R8804 TP8875 R8803 TP8874 TP8872 TP8873 TP8870 TP8871 TP8868 TP8869 TP8866 TP8867 TP8864 TP8865 TP8863 TP8861 TP8862 TP8860 TP8858 TP8859 TP8854 TP8857 TP8856 TP8855 TP8853 TP8852 TP8851 TP8849 TP8847 TP8846 TP8844 TP8845 TP8843 TP8848 TP8850
R9397 R9401 R9399 R9398
R9386 TP9304 R9384 R9389 R9363 R9367 R9385
TP9305 R9370 R9372 R9386 R9387 R9368 R9371
R9469 R9470 R9471 C9457
R9477 R9463 R9464 R9465 C9455 R9466
C9454 R9455 R9456 R9460 R9461 R9462 R9335 R9452 R9478
TP8896 TP8895
TP9010 C8918 R8913 R8912 Q8902 TP8928 D8904 TP8934 TP8929 C8920 C8919 R8946 C8947 C8910 TP8933 R8940
TP8931 R8938 R8970 C8959 Q8903 Q8907 TP8932 C8958 TP8930 R8932 R8943 R8944 R8945 R8947 C8932 R8941 C8933 R8948 TP9002
TP8908 R9101 R9120 TP9615 TP9614 TP9613 TP9621 Q9601 TP9616 TP9617
R8958 TP8920 Q8913 R8957 R8959 R8962 R8922 R8956 C8924 Q8912 R8934 C8931 R8933 R8961 R9301 C8927 R8923
R9472 TP8915 TP8918 R8954 R8930 R8955 Q8911 Q8910 R8953 C8923

(ANP2220-A)

9. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47 k ohm (tolerance is shown by J = 5%, and K = 10%).

  560 Ω → 56 × 10^1 → 561 ………… RD1/4PU $\boxed{5}\boxed{6}\boxed{1}$ J
  47 kΩ → 47 × 10^3 → 473 ………… RD1/4PU $\boxed{4}\boxed{7}\boxed{3}$ J
  0.5 Ω → R50 ………… RN2H $\boxed{R}\boxed{5}\boxed{0}$ K
  1 Ω → 1R0 ………… RS1P $\boxed{1}\boxed{R}\boxed{0}$ K

  Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

  5.62 kΩ → 562 × 10^1 → 5621 ………… RN1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ F

- *Meaning of the figures and others in the parentheses in the parts list.*

  Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
  IC 301 (A, 91, 111) IC NJM2068V

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1..	P.CHASSIS(509FE)ASSY	AWU1297
NSP	2..	50F ADDRESS ASSY	AWV2544
NSP	3..	50F ADDRESS L ASSY	AWW1348
NSP	3..	50F ADDRESS S ASSY	AWW1349
NSP	2..	50F SCAN ASSY	AWV2548
NSP	3..	50F SCAN A ASSY	AWW1350
NSP	3..	50F SCAN B ASS'Y	AWW1351
NSP	1..	50F DIGITAL ASSY	AWV2543
	2..	SENSOR ASSY	AWW1340
	2..	50F DIGITAL ASSY	AWW1347
	1..	50F X DRIVE ASSY	AWV2546
	1..	50F Y DRIVE ASSY	AWV2547
⚠NSP	1..	FUKUGO ASSY(EU HD)	AWV2552
	2..	IO AUDIO ASSY(EU SD)	AWW1354
	2..	SIDE IO ASSY(EU)	AWW1358
	2..	SIDE KEY ASSY	AWW1361
	2..	LED ASSY	AWW1362
	2..	IR ASSY	AWW1363
	2..	FAN CONNECT ASSY	AWW1364
	2..	RLS ASSY	AWW1365
	2..	POWER SW ASSY	AWW1366
⚠	1..	MAIN ASSY (EU HD)	AWV2556
	1..	CARD ASSY (EU HD)	AWV2558
⚠	1..	POWER SUPPLY UNIT	AXY1200

Unit Name: 50F ADDRESS L ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 1601		PEE005B
	IC 1701		TND307TD
	Q 1711,1721,1731,1741		RJM1001DSP
	Q 1791		RN1901
	Q 1792		2SA1576A
	D 1701		1SS302
	D 1711,1721,1731,1741		UDZS15(B)
	D 1712,1722,1732,1742		RF05VA2S
	D 1713,1714,1723,1724		RF04UA2D
	D 1733,1734,1743,1744		RF04UA2D

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 1601-1603	CHIP SOLID INDUCTOR	QTL1013
	L 1711,1721,1731,1741	INDUCTOR (1.2 uH)	ATH1233
	CN 1601	CONNECTOR	AKM1289
	CN 1602	26P CONNECTOR	AKM1397

RESISTORS

Mark	No.	Description	Part No.
	R 1601-1605		RS1/16SS1000F
	R 1606-1629,1632,1638		RS1/16SS470J
	R 1630,1631,1634,1640		RS1/16SS220J
	R 1636		RS1/16SS330J
	R 1641,1644,1646		RS1/16SS220J
	R 1642,1648		RS1/16SS470J
	R 1650		RS1/16SS472J
	R 1652,1653,1662,1663		RS1/16SS0R0J
	R 1672,1673,1682,1683		RS1/16SS0R0J
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
	C 1602,1607,1609		CKSRYB105K6R3
	C 1603-1606		CKSRYB104K16
	C 1611		CKSSYB102K50
	C 1652,1662,1672,1682		ACG1105
	C 1653,1663,1673,1683		CKSSYB104K10
	C 1654,1674		CCSSCH680J50
	C 1664,1684		CCSSCH220J50
	C 1701		CKSQYB105K16
	C 1702		ACG1154
	C 1711,1721,1731,1741		ACG1137
	C 1712,1722,1732,1742		ACG1123

Unit Name: 50F ADDRESS S ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 1801		PEE005B
	IC 1901		TND307TD
	Q 1911,1921,1931		RJM1001DSP
	Q 1991		RN1901
	Q 1992		2SA1576A
	D 1901		1SS302
	D 1911,1921,1931		UDZS15(B)
	D 1912,1922,1932		RF05VA2S
	D 1913,1914,1923,1924		RF04UA2D
	D 1933,1934		RF04UA2D

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 1801-1803	CHIP SOLID INDUCTOR	QTL1013
	L 1911,1921,1931	INDUCTOR (1.2 uH)	ATH1233
	CN 1801	CONNECTOR	AKM1289
	CN 1802	26P CONNECTOR	AKM1397

RESISTORS

Mark	No.	Description	Part No.
	R 1801-1805		RS1/16SS1000F
	R 1806-1823,1832,1836		RS1/16SS470J
	R 1830,1831,1840,1841		RS1/16SS220J
	R 1834,1844,1846		RS1/16SS330J
	R 1842		RS1/16SS470J
	R 1850		RS1/16SS472J
	R 1852,1853,1862,1863		RS1/16SS0R0J
	R 1872,1873		RS1/16SS0R0J
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
	C 1802,1807,1809		CKSRYB105K6R3
	C 1803-1806		CKSRYB104K16
	C 1811		CKSSYB102K50
	C 1852,1862,1872		ACG1105
	C 1853,1863,1873		CKSSYB104K10
	C 1854,1874		CCSSCH220J50
	C 1864		CCSSCH680J50
	C 1901		CKSQYB105K16
	C 1902		ACG1154
	C 1911,1921,1931		ACG1137
	C 1912,1922,1932		ACG1123

Unit Name: 50F SCAN A ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 2801-2808		AN16184A
	D 2800-2805		MC2850-11
	D 2895		RB551V-30

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN 2801	3PIECE CONNECTOR 15P	AKP1328

RESISTORS

Mark	No.	Description	Part No.
	R 2812,2822,2832,2842		RAB4C221J
	R 2852,2862,2872,2882		RAB4C221J
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
	C 2810,2814,2815,2824		CCSRCH151J50
	C 2811,2812,2820-2822		CCSRCH220J50
	C 2813,2823,2833,2843		CCSRCH680J50
	C 2817,2827,2837,2847		CKSRYB105K6R3
	C 2818,2828,2838,2848		ACG1125
	C 2825,2834,2835,2844		CCSRCH151J50
	C 2830-2832,2840-2842		CCSRCH220J50
	C 2845,2854,2855,2864		CCSRCH151J50
	C 2850-2852,2860-2862		CCSRCH220J50
	C 2853,2863,2873,2883		CCSRCH680J50
	C 2857,2867,2877,2887		CKSRYB105K6R3
	C 2858,2868,2878,2888		ACG1125
	C 2865,2874,2875,2884		CCSRCH151J50
	C 2870-2872,2880-2882		CCSRCH220J50
	C 2885		CCSRCH151J50

Unit Name: 50F SCAN B ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 2901-2908		AN16184A
	D 2900-2905		MC2850-11
	D 2995		RB551V-30

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN 2901	3PIECE CONNECTOR 15P	AKP1328

RESISTORS

Mark	No.	Description	Part No.
	R 2912,2922,2932,2942		RAB4C221J
	R 2952,2962,2972,2982		RAB4C221J
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
	C 2911,2912,2916,2921		CCSRCH220J50
	C 2913,2923,2933,2943		CCSRCH680J50
	C 2914,2915,2924,2925		CCSRCH151J50
	C 2917,2927,2937,2947		CKSRYB105K6R3
	C 2918,2928,2938,2948		ACG1125
	C 2922,2926,2931,2932		CCSRCH220J50
	C 2934,2935,2944,2945		CCSRCH151J50
	C 2936,2941,2942,2946		CCSRCH220J50
	C 2951,2952,2956,2961		CCSRCH220J50
	C 2953,2963,2973,2983		CCSRCH680J50
	C 2954,2955,2964,2965		CCSRCH151J50
	C 2957,2967,2977,2987		CKSRYB105K6R3
	C 2958,2968,2978,2988		ACG1125
	C 2962,2966,2971,2972		CCSRCH220J50
	C 2974,2975,2984-2986		CCSRCH151J50
	C 2976,2981,2982		CCSRCH220J50

Unit Name: SENSOR ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 3901		MM1522XU
	IC 3902		BR24L02FJ-W
	Q 3901		HN1B04FU

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN 3901	5PIN CONNECTOR	AKM1404

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 3901,3902		CKSRYB105K6R3
	C 3905,3906		CKSSYB104K10

Unit Name: 50F DIGITAL ASSY

MISCELLANEOUS

Mark	No.	Description	Part No.
	3202	HEAT SINK B	ANH1645
	3203	THERMAL SHEET B	AEB1417

Mark	No.	Description	Part No.
Block Name: MAIN I/F BLOCK			
SEMICONDUCTORS			
	Q 3201		RN1901
MISCELLANEOUS			
⚠	L 3201	CHIP BEEDS FILTER	BTX1042
	CN 3201	50P CONNECTOR	AKM1399
	CN 3202	40P CONNECTOR	AKM1398
	CN 3203	6PIN CONNECTOR	AKM1405
RESISTORS			
	R 3201-3207,3211-3218		RAB4CQ100J
	Other Resistors		RS1/16SS###J
CAPACITORS			
	C 3201		ACG1150
	C 3202		CKSSYB102K50
	C 3203		CCSSCH101J50
Block Name: SQ ASIC BLOCK			
SEMICONDUCTORS			
	IC 3301		PEG383B
	IC 3303		TC7SH08FUS1
	IC 3304		TC7SH32FUS1
MISCELLANEOUS			
⚠	L 3301,3302	CHIP BEEDS FILTER	BTX1042
⚠	L 3303	CHIP BEEDS FILTER	BTX1039
⚠	L 3304-3307	CHIP BEEDS FILTER	BTX1042
⚠	X 3301	CRYSTAL (27 MHz)	ASS1215
	CN 3301	CONNECTOR	CKS4835
RESISTORS			
	R 3302,3307-3310		RAB4CQ101J
	R 3306,3386		RAB4CQ103J
	R 3313		RS1/16SS1000F
	R 3314-3319		RAB4CQ100J
	R 3321-3325		RAB4CQ470J
	R 3332-3338,3344-3346		RAB4CQ220J
	R 3351-3359,3361-3367		RAB4CQ220J
	R 3371-3377		RAB4CQ220J
	Other Resistors		RS1/16SS###J
CAPACITORS			
	C 3301-3306,3309,3310		CKSSYB104K10
	C 3307,3311,3331-3334		ACG1150
	C 3312-3330,3335,3336		CKSSYB104K10
	C 3337		CCSRCH471J50
	C 3338,3340		ACG1149
	C 3339,3341,3342		CKSSYB104K10
	C 3343		ACG1150
	C 3345-3355,3357-3386		CKSSYB104K10
	C 3356,3392		CCSRCH470J50
	C 3387-3389		CKSRYB105K6R3
	C 3390,3391,3393-3395		CKSSYB104K10
Block Name: LVDS TX BLOCK 50			
SEMICONDUCTORS			
	IC 3401		PEG478A
MISCELLANEOUS			
⚠	L 3401-3407	CHIP BEEDS FILTER	BTX1042

Mark	No.	Description	Part No.
RESISTORS			
	R 3401		RS1/16SS5601F
	R 3497		RS1/10SR221J
	Other Resistors		RS1/16SS###J
CAPACITORS			
	C 3401,3402		ACG1149
	C 3403-3410,3415-3420		CKSSYB104K10
	C 3411,3413,3421,3435		ACG1150
	C 3423-3434,3436-3442		CKSSYB104K10
	C 3443,3499		ACG1150
	C 3444-3448,3451-3457		CKSSYB104K10
Block Name: ADDRESS CN BLOCK			
SEMICONDUCTORS			
	Q 3501,3504		DTC143EUA
	Q 3502,3503,3506,3508		RN1901
	D 3501-3504		DAN202U
MISCELLANEOUS			
	CN 3501-3508,3510	26P CONNECTOR	AKM1397
	CN 3509	50P CONNECTOR	AKM1399
RESISTORS			
	R 3502,3504,3507		RAB4CQ101J
	R 3503,3505		RAB4CQ102J
	Other Resistors		RS1/16SS###J
CAPACITORS			
	C 3501-3508,3510-3512		CKSSYB102K50
	C 3514,3516,3518-3520		CKSSYB102K50
Block Name: MODEULE UCOM BLOCK			
SEMICONDUCTORS			
	IC 3602		BR24L04FJ-W
	IC 3604		TC74VHC08FTS1
	IC 3605		MB88347LPFV-GBND
	IC 3607		TC74VHC123AFTS1
	IC 3608		TC74VHC126FTS1
	IC 3609,3610		TC74LCX541FTS1
	IC 3611		PST3628UR
	Q 3602		2SJ461A
	Q 3604		RN1902
	D 3601-3604		DAN202U
	D 3606-3608,3612		1SS352
	D 3609,3611		SML-310MT
	D 3610		SML-D12V8W
MISCELLANEOUS			
⚠	X 3601	CERAMIC OSCILLATOR	CSS1616
	CN 3601	5PIN CONNECTOR	AKM1418
	CN 3602,3603	CONNECTOR	CKS4828
RESISTORS			
	R 3603,3608		RAB4CQ222J
	R 3604,3607		RAB4CQ101J
	R 3606,3615		RAB4CQ470J
	R 3639,3666		RAB4CQ103J
	Other Resistors		RS1/16SS###J
CAPACITORS			
	C 3601,3603-3606		CKSSYB104K10
	C 3602,3615,3635,3636		CCSSCH101J50
	C 3608-3612,3614,3618		CKSSYB104K10
	C 3619		CKSRYB103K50

Mark	No.	Description	Part No.
	C 3620-3622		CKSRYB105K6R3
	C 3630		CKSSYB104K10
	C 3631		CKSRYB472K50
	C 3632-3634		CKSSYB102K50

Block Name: DD CON BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 3801		BD8606FV
	IC 3802		TC74VHC08FTS1
	IC 3803		S-1170B18UC-OTD
	IC 3804		BD12KA5WFP
	IC 3805		PST3628UR
	IC 3808		PQ200WNA1ZPH
	Q 3801,3803		DTC144EUA
	Q 3802		RN1901
	Q 3804		DTC143EUA
	Q 3841,3861,3881		SP8M4
	D 3801,3802,3882		1SS352
	D 3841,3861,3881		RB060M-30

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	L 3801	CHIP BEEDS FILTER	BTX1039
⚠	L 3841,3881	INDUCTOR (4.7 uH)	ATH1235
⚠	L 3861	INDUCTOR (5 uH)	BTH1110
	CN 3801	10PIN CONNECTOR	AKM1409
	CN 3802	CONNECTOR	AKM1277
	FU 3801	CHIP FUSE	AEK1087

RESISTORS

Mark	No.	Description	Part No.
	R 3801,3802		RAB4CQ101J
	R 3815		RS1/10SR4301D
	R 3816		RS1/10SR1301D
	R 3828		RS1/10SR2702D
	R 3832		RS1/10SR221J
	R 3836		RS1/16SS2202F
	R 3837,3838		RS1/16SS3901F
	R 3841,3843,3863		RS1/10SR3302D
	R 3844		RS1/10SR4702D
	R 3845		RS1/10SR2002D
	R 3861		RS1/10SR1503D
	R 3862,3882		RS1/10SR3001D
	R 3864,3883		RS1/10SR3902D
	R 3865		RS1/10SR1003D
	R 3881		RS1/10SR1203D
	R 3885		RS1/10SR7502D
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 3801-3804,3808,3821		CKSSYB102K50
	C 3805,3806		CKSSYB104K10
	C 3807		CKSRYB472K50
	C 3809		CKSRYB104K16
	C 3810,3811,3841,3842		ACG1150
	C 3812,3814,3824		CKSRYB105K6R3
	C 3813,3815,3843,3847		ACG1149
	C 3817,3825,3826		DCH1165
	C 3818		CCSSCH101J50
	C 3820,3844		CCSRCH221J50
	C 3845,3888		CKSRYB682K50
	C 3848		CKSRYB153K50
	C 3861,3862,3881,3882		ACG1150

Mark	No.	Description	Part No.
	C 3863,3867,3883,3887		ACG1149
	C 3864		CCSRCH470J50
	C 3865		CKSRYB152K50
	C 3868		CKSRYB103K50
	C 3884		CCSRCH620J50
	C 3885		CKSRYB182K50

Unit Name: 50F X DRIVE ASSY

Block Name: 50X LOGIC BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 1001		TC74ACT541FT
	IC 1002		TC74ACT540FT
	D 1002,1005-1008		1SS352
	D 1003,1051,1055		MC2848-11

MISCELLANEOUS

Mark	No.	Description	Part No.
	K 1008-1010	TEST PIN	AKX1061
	VR 1002	SEMI FIXED RESISTOR	CCP1517
	CN 1001	26P CONNECTOR	AKM1397

RESISTORS

Mark	No.	Description	Part No.
	R 1001,1003		RAB4C470J
	R 1002,1004,1007,1025		RAB4C472J
	R 1012		RS1/8SQ0R0J
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
	C 1001		CCSRCH331J50
	C 1003,1004		CKSRYB104K25
	C 1005		ACH1479
	C 1006		CCSRCH680J50

Block Name: 50X RESONANCE BLCOK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 1101		PS9818-1(P)
	IC 1104,1105		TND307TD
	IC 1106		PS2701A-1(LP)
	Q 1101		2SC2412K
	Q 1102,1103		2SC4081
	Q 1104,1105		QSZ2
	Q 1108,1112,1116,1119		GT30F122
	D 1101		UDZS5R6(B)
	D 1102		UDZS8R2(B)
	D 1106,1110,1123,1127		RF2001T3S
	D 1113,1116,1128,1129		RF101L4S
	D 1114		RF081M2S

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 1101	INDUCTOR (85 nH)	ATH1248
	L 1103	INDUCTOR (300 nH)	ATH1251
	L 1105,1106	CHIP COIL (1 uH)	BTH1118
	1101	SCREW	PMH30P080FTC

RESISTORS

Mark	No.	Description	Part No.
	R 1103,1109,1144,1150		RS1/8SQ4R7J
	R 1104,1110,1145,1151		RS1/8SQ103J
	R 1116,1118,1154		ACN1116
	R 1136		RS1/10SR4702F
	R 1137		RS1/10SR1502F
	R 1138,1152,1153		RS1/8SQ0R0J
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
	C 1101		ACH1478

Mark	No.	Description	Part No.
C	1102-1105		ACE1178
C	1106,1113,1114,1116		CKSRYB104K25
C	1107,1110		CKSQYB474K25
C	1112		ACG1126
C	1115		ACH1406
C	1117		CKSRYB104K50
C	1118		CCG1186

Block Name: 50X SUS BLCOK

SEMICONDUCTORS

IC	1204		PS9818-2(P)
IC	1206		PQ050DNA1ZPH
IC	1207,1209		TND307TD
Q	1201		R3007AND
Q	1202		DTC123TKA
Q	1203		2SD1664
Q	1204,1205,1207,1208		QSZ2
Q	1209		DTC143EK
Q	1212		2SK3498
Q	1218,1219,1221-1223		RJH3044DPP
Q	1225,1227		QSZ2
Q	1226		RJH3044DPP
D	1201		UDZS8R2(B)
D	1202		UDZS5R6(B)
D	1207		RF101L4S
D	1208,1216-1218		1SS352
D	1209		RF081M2S

MISCELLANEOUS

L	1201,1202	CHIP INDUCTOR (10 uH)	BTH1134
L	1205,1206	INDUCTOR (1.0 uH)	ATH1186
K	1201-1205	TEST PIN	AKX1061
KN	1201-1204,1206	GROUND PLATE	ANK1949
KN	1207,1211-1213	GROUND PLATE	ANK1949
KN	1215,1216	GROUND PLATE	ANK1949
CN	1201	CONNECTOR	B11B-EH
CN	1205,1206	PLUG(5P)	KM200NA5
	1201	SCREW	PMH30P080FTC

RESISTORS

R	1203,1204,1210,1211		RS1/8SQ4R7J
R	1205		RST1/2SP1R8J
R	1212,1290		RS1/8SQ0R0J
R	1213,1247,1259,1260		RS1/8SQ4R7J
R	1216		ACN1127
R	1217		RST1/2SP2R2J
R	1277		ACN1120
Other Resistors			RS1/10SR###J

CAPACITORS

C	1201,1202,1271		ACH1478
C	1204		ACH1479
C	1206,1207,1228,1229		CKSRYB104K25
C	1210		ACH1480
C	1212,1213,1216,1218		CKSQYB474K25
⚠ C	1214,1215,1221		ACG1139
C	1219,1230,1274		CKSQYB474K25
⚠ C	1222,1225,1227		CCG1186
C	1232		CCSRCH221J50
C	1234,1246		CKSRYB104K25
C	1240,1241,1243		ACH1424
C	1244,1245		ACH1477
C	1258,1259,1261		ACE1178

Mark	No.	Description	Part No.
C	1278-1280		CKSRYB102K50
C	1281		CKSRYB103K50

Block Name: 50X OFFSET BLCOK

SEMICONDUCTORS

IC	1301		PS9818-2(P)
IC	1307,1308		TND307TD
Q	1301-1304		R3007AND
D	1304,1306		RF101L4S
D	1308,1309		1SS302
D	1310,1311		UDZS16(B)

RESISTORS

R	1304,1308		RS1/8SQ4R7J
R	1312		ACN1108
R	1313,1353		ACN1117
R	1317,1319		RS1/8SQ101J
R	1320,1322		RS1/8SQ100J
Other Resistors			RS1/10SR###J

CAPACITORS

C	1301		ACH1478
C	1302,1303		ACH1483
C	1306		CKSQYB474K25
C	1310,1312		CKSRYB104K25

Block Name: 50X D-D BLCOK

SEMICONDUCTORS

IC	1401,1402		MM1431AN
IC	1403,1404		BA2904FVM
Q	1402		2SD1898
Q	1403,1405		2SD27240
Q	1404,1406		2SD2568
Q	1407		HN1C01FU
Q	1408,1409		2SC4081
D	1401		1SS301
D	1402,1407,1416,1423		RF081M2S
D	1404,1405,1424,1425		1SS352
D	1406		CRF03
D	1408		UDZS5R6(B)
D	1409		UDZS5R1(B)
D	1410		MC2848-11

MISCELLANEOUS

VR	1401,1402	SEMI-FIXED VR (10 K)	DCP1089
T	1401	TRANSFORMER	ATK1166

RESISTORS

R	1402,1453		RST1/2SP224J
R	1403,1408,1469-1472		RST1/2SP473J
R	1407		RS1/4SA224J
R	1418,1468		RS1/8SQ0R0J
R	1424,1425,1427,1428		RS1/8SQ1003F
R	1431		RS1/10SR2401F
R	1436,1446		RS1/10SR6801F
R	1437,1447		RS1/10SR1002F
R	1438,1448		RS1/10SR2202F
R	1439		RS1/10SR6201F
R	1441		RS1/10SR1502F
R	1449		RS1/10SR5601F
R	1455,1456		RST1/2SP100J
Other Resistors			RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
C	1401,1409		ACH1428
C	1402		ACH1480
C	1403,1422		CKSRYB103K50
C	1405		CKSQYB225K10
C	1406		ACH1464
C	1408		ACH1473
C	1410-1415,1421		CKSRYB104K25
C	1416		CKSRYB105K6R3

Unit Name: 50F Y DRIVE ASSY

Block Name: 50Y LOGIC BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	2001,2002		TC74ACT541FT
IC	2004,2005		TC74ACT540FT
D	2002,2004,2006		1SS352
D	2003,2011-2015		1SS301
D	2016-2018		1SS352

MISCELLANEOUS

Mark	No.	Description	Part No.
K	2011,2017	TEST PIN	AKX1061
VR	2001,2002	SEMI FIXED RESISTOR	CCP1517
CN	2001	50P CONNECTOR	AKM1399

RESISTORS

Mark	No.	Description	Part No.
R	2001,2002		RAB4C220J
R	2003,2004,2007,2009		RAB4C470J
R	2005,2006,2008,2010		RAB4C472J
R	2011,2012		RAB4C470J
R	2013,2014		RAB4C472J
R	2015,2016		RAB4C101J
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
C	2001		ACH1479
C	2003		CCSRCH680J50
C	2004-2006,2009		CKSRYB104K25
C	2007,2008		CCSRCH331J50

Block Name: 50Y RESONANCE BLCOK

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	2101		PS9818-1(P)
IC	2102		PS2701A-1(LP)
IC	2103,2104		TND307TD
Q	2101		2SC2412K
Q	2102,2103		2SC4081
Q	2104,2105		QSZ2
Q	2106-2109		RJP6065DPN
Q	2111,2113		RG4030CLX
D	2101		UDZS5R6(B)
D	2102		UDZS8R2(B)
D	2104,2105		RF2001T4S
D	2106,2107		RF2001T6S
D	2112,2113		RF2L6S
D	2115,2116		RF101L4S
D	2117		RF081M2S

MISCELLANEOUS

Mark	No.	Description	Part No.
L	2101	INDUCTOR (85 nH)	ATH1248
L	2103	INDUCTOR (300 nH)	ATH1251
L	2105,2106	CHIP COIL (1 uH)	BTH1118
	2104	SCREW	PMH30P080FTC

RESISTORS

Mark	No.	Description	Part No.
R	2101,2103,2105,2106		RS1/8SQ2R2J
R	2102,2104,2110,2114		RS1/8SQ103J
R	2112,2113		RS1/8SQ2R2J
R	2115,2116		ACN1118
R	2117		ACN1116
R	2119		RST1/2SP4R7J
R	2126,2133		RS1/8SQ0R0J
R	2130		RS1/10SR4702F
R	2135		RS1/10SR1502F
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
C	2103-2105,2119		CKSRYB104K25
C	2106,2108,2109		CKSQYB474K25
C	2107		ACG1139
C	2110		ACG1113
C	2112-2115		ACE1184
C	2118		ACH1406
C	2151		ACH1478
C	2161		CKSRYB102K50

Block Name: 50Y SUS BLCOK

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	2201		PS9818-1(P)
IC	2203,2204		TND307TD
Q	2201		DTC143EK
Q	2202		DTC123TKA
Q	2203		2SD1664
Q	2204-2206,2208-2210		QSZ2
Q	2217-2219,2221-2223		RJH3044DPP
D	2201		UDZS8R2(B)
D	2202		UDZS5R6(B)
D	2204-2206		RF081M2S
D	2213,2221-2223		RF101L4S

MISCELLANEOUS

Mark	No.	Description	Part No.
	2203	SCREW	PMH30P080FTC

RESISTORS

Mark	No.	Description	Part No.
R	2202,2204,2206		RS1/8SQ2R2J
R	2209-2211		RS1/8SQ4R7J
R	2213		RST1/2SP1R8J
R	2214,2254,2255		RS1/8SQ0R0J
R	2215		RST1/2SP4R7J
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
C	2201,2202		ACH1478
⚠ C	2203,2207,2208		ACG1126
C	2204-2206,2210,2221		CKSQYB474K25
⚠ C	2212-2214		ACG1126
C	2216-2218,2240		CKSRYB104K25
C	2219		CCSRCH221J50
C	2222		CKSQYB474K25
C	2231-2233		CKSRYB102K50

Block Name: 50Y MSK BLCOK

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	2301		PS9818-2(P)
IC	2303		PQ050DNA1ZPH
IC	2304		TND307TD
Q	2301		2SD1664
Q	2302,2303		QSZ2

Mark	No. Description	Part No.
Q	2304,2306,2308,2309	RJK1535DPE
Q	2312,2314	RJK1535DPE
Q	2321-2326,2328-2331	R5016ANJ
Q	2333,2334	R5016ANJ
D	2301	UDZS5R6(B)
D	2302	1SS352
D	2304-2306	RF081M2S

MISCELLANEOUS

L	2301,2302 CHIP INDUCTOR (10 uH)	BTH1134
L	2304,2305 INDUCTOR (1.0 uH)	ATH1186
K	2301-2305 TEST PIN	AKX1061
KN	2301-2308 GROUND PLATE	ANK1949
KN	2310-2317 GROUND PLATE	ANK1949
CN	2301 11P CONECTOR	B11B-XASK-1
CN	2303,2304 PLUG(5P)	KM200NA5

RESISTORS

R	2302	RS1/8SQ2R2J
R	2303,2305,2307,2308	RS1/8SQ100J
R	2311,2313,2320-2325	RS1/8SQ100J
R	2327-2330,2332,2333	RS1/8SQ100J
R	2335	RST1/2SP1R0J
	Other Resistors	RS1/10SR###J

CAPACITORS

C	2301-2303	ACH1424
C	2305,2306	ACH1477
C	2307,2312	ACH1478
C	2308	ACH1480
C	2309	ACH1479
C	2314,2315	CKSQYB474K25
⚠ C	2316,2318	CCG1186
C	2319,2321,2323,2325	CKSRYB104K25
C	2326	CKSRYB104K25
C	2328	CKSYB105K16
C	2329-2331	ACE1149

Block Name: 50Y OFFSET BLCOK

SEMICONDUCTORS

IC	2401	PS9818-1(P)
IC	2403,2404	PS9818-2(P)
IC	2407-2413	TND307TD
Q	2401,2402	2SK3458-ZK
Q	2403	2SC2412K
Q	2404,2405	2SD1664
Q	2410,2411,2414-2417	QSZ2
Q	2418	2SK3301
Q	2419	2SK3113B-ZK
Q	2423,2435	R4008AND
Q	2424,2425,2427-2429	R5009ANJ
Q	2430,2432	2SK3677-01MR
Q	2431	R5009ANJ
Q	2433,2434	QSZ2
D	2401	CRF03
D	2402-2406	1SS302
D	2407,2409,2411	UDZS5R6(B)
D	2408,2410,2412-2414	UDZS16(B)
D	2415,2416,2418	EC8FS6
D	2417	RF501B6S

RESISTORS

R	2401	ACN1127
R	2403	ACN1126
R	2404	ACN1122
R	2406-2411	ACN1114
R	2412,2413	ACN1116
R	2414,2415	ACN1123
R	2417,2418	RS2MMF101J
	Other Resistors	RS1/10SR###J

CAPACITORS

C	2401-2403,2405,2406	ACH1427
C	2407,2408	ACH1426
C	2410	ACH1427
C	2412-2418	ACH1478
C	2420,2421,2424-2429	CKSRYB104K25
C	2433,2435-2441	CKSRYB104K25
C	2449-2452	CKSRYB104K25

Block Name: 50Y SCAN BLCOK

SEMICONDUCTORS

IC	2501,2502	PS9852-2(P)
IC	2503,2504	PS9818-2(P)
IC	2517-2520	TC74AC540FT

MISCELLANEOUS

L	2501 CHIP INDUCTOR (10 uH)	BTH1134
L	2502 CHIP INDUCTOR (47 uH)	BTH1136
CN	2501,2502 15P CONNECTOR	AKM1200

RESISTORS

	All Resistors	RS1/10SR###J

CAPACITORS

C	2502	ACH1482
C	2503	ACH1480
C	2507,2508	ACG1132
C	2509,2515-2517,2520	CKSRYB104K25
C	2521,2526,2527	CKSRYB104K25
C	2528,2529	ACH1436

Block Name: 50Y MAIN D-D BLOCK 1

SEMICONDUCTORS

IC	2601	MR1712-7101
IC	2602,2603	MM1431AN
IC	2604,2651	PS2701A-1(LP)
IC	2606	BA2904FVM
Q	2601,2651,2652	2SC4081
Q	2604	2SC3425
Q	2605	2SD2568
Q	2606	UMH1N
Q	2662	2SD1898
Q	2663	HN1C01FU
D	2601,2612,2664	1SS352
D	2602-2604,2606,2616	CRF03
D	2605,2607,2609,2611	RF081M2S
D	2608,2610	CRF02
D	2613	RF101L4S
D	2614	UDZS8R2(B)
D	2651,2652	UDZS33(B)
D	2661	UDZS5R6(B)
D	2662	1SS301
D	2665,2666	RF081M2S
D	2670	UDZS18(B)

MISCELLANEOUS

Mark	No.	Description	Part No.
VR	2602	SEMI FIXED RESISTOR	CCP1518
VR	2603	SEMI FIXED RESISTOR	CCP1517
T	2601	TRANSFORMER	ATK1168
T	2661	SWITCHING TRANS.	ATK1162

RESISTORS

Mark	No.	Description	Part No.
R	2601		RST1/2SP224J
R	2602-2608,2626		RS1/4SA224J
R	2609		RS1MMF683J
R	2610		RST1/2SP100J
R	2611		RS1/8SQ100J
R	2621		RS1/10SR4702F
R	2623		RS1/10SR4701F
R	2624		RS1/10SR1003F
R	2634,2643		RS1/8SQ0R0J
R	2641		RS1/10SR1502F
R	2651		RS1/8SQ2202F
R	2652,2653		RS1/8SQ3302F
		Other Resistors	RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
C	2601		CEHAT470M2A
C	2602,2661,2662		ACH1480
C	2603		ACH1464
C	2605		ACG1126
C	2606		ACH1427
C	2607,2608		ACG1113
C	2609,2610		CKSRYB104K25
C	2611,2620		CKSRYB104K50
C	2612		ACH1482
C	2613,2615		CCSRCH102J50
C	2614		CCSRCH101J50
C	2616,2619		ACH1425
C	2618		ACH1360
C	2650,2653,2655		CKSRYB104K16
C	2654		CCSRCH471J50
C	2663		CKSRYB103K50
C	2664		CKSRYB105K6R3
C	2666		CKSQYB225K10
C	2667		CKSYB105K25
C	2668		ACG1105

Block Name: 50Y MAIN D-D BLCOK 2

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	2701-2703		MM1431AN
IC	2704-2706		BA2904FVM
IC	2761		PS2701A-1(LP)
Q	2701		2SA1163
Q	2702-2704		2SA1727
Q	2705-2707		2SA1924
Q	2708		2SC2412K
Q	2709		2SA2005
Q	2710,2764		2SD1898
Q	2711		2SC2713
Q	2761		2SA1576A
Q	2762		UMH1N
Q	2766		HN1C01FU
D	2701,2702,2764		1SS301
D	2703,2704,2766		1SS352
D	2705		UDZS8R2(B)
D	2767-2769		RF081M2S

MISCELLANEOUS

Mark	No.	Description	Part No.
L	2701	CHIP COIL (100 uH)	BTH1124
VR	2702-2705	SEMI FIXED RESISTOR	CCP1517
T	2761	CONVERTER TRANS.	ATK1156

RESISTORS

Mark	No.	Description	Part No.
R	2701-2704,2706-2708		RS1/4SA224J
R	2711,2712		RS1/4SA224J
R	2713		ACN1119
R	2714,2715,2717		RST1/2SP100J
R	2718		RS1/10SR1202F
R	2719		RS1/10SR4702F
R	2722,2731		RS1/10SR1501F
R	2724-2726,2745,2756		RS1/10SR4701F
R	2754,2755,2757		RS1/10SR1502F
R	2760		RS1/8SQ0R0J
R	2771,2775		RS1/10SR4701F
R	2778		ACN1132
		Other Resistors	RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
C	2701,2761,2762		ACH1480
C	2702-2704,2706-2708		CKSRYB104K25
C	2705		ACH1406
C	2709		ACH1472
C	2710,2711		ACH1469
C	2712		ACG1142
C	2713,2764,2776		CKSRYB103K50
C	2714		ACG1145
C	2716,2777		CKSRYB104K25
C	2763		ACH1481
C	2768		CKSQYB225K10
C	2770,2771		CKSRYB105K6R3
C	2774		CKSRYB104K50
C	2775		BCG1069

Unit Name: IO AUDIO ASSY(EU SD)

Block Name: BOARD IF BLOCK(EU)

SEMICONDUCTORS

Mark	No.	Description	Part No.
D	7605,7606		UDZS8R2(B)
D	7611		UDZS5R1(B)

MISCELLANEOUS

Mark	No.	Description	Part No.
CN	7501	CONNECTOR 7P	AKM1377
CN	7502	CONNECTOR	B5P-VH
CN	7503	50P CONNECTOR	AKM1399
CN	7504	40P CONNECTOR	AKM1398
CN	7505	11PIN CONNECTOR	AKM1371
CN	7506	FFC CONNECTOR 12P	AKM1385

RESISTORS

Mark	No.	Description	Part No.
R	7601,7602,7609		RS1/10SR0R0J
R	7611,7631-7633		RS1/10SR75R0F
R	7634		RS1/10SR1500F
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	7605,7606,7611		CKSRYB105K10
C	7609		CKSSYB104K10

Block Name: IO 0 BLOCK(EU)

SEMICONDUCTORS

Mark	No.	Description	Part No.
Q	7702-7704		UMD2N

Mark	No.	Description	Part No.
	Q 7705-7708		2SC4081
	Q 7709		HN1C01FU
	D 7701,7704,7705,7711		UDZS12(B)
	D 7702,7703,7707-7710		UDZS5R1(B)
	D 7712-7714,7718-7721		UDZS5R1(B)
	D 7715,7717		UDZS12(B)

MISCELLANEOUS

	JA 7701-7703	RGB CONNECTOR	AKP1331

RESISTORS

	R 7701-7703,7705		RS1/10SR151J
	R 7704,7706,7710		RS1/10SR121J
	R 7707-7709		RS1/10SR151J
	R 7719,7733-7736,7746		RS1/10SR75R0F
	R 7748,7760,7762,7763		RS1/10SR75R0F
	Other Resistors		RS1/16SS###J

CAPACITORS

	C 7701-7706		CCG1205
	C 7707-7709,7712-7716		CKSSYB102K50
	C 7717,7722		CCSSCH680J50
	C 7718-7721,7723,7724		CKSSYB102K50
	C 7725-7727,7729-7736		CKSRYB105K10
	C 7728,7739,7740		CCSRCH101J50
	C 7737,7742		CKSSYB103K16
	C 7738,7741,7743,7744		CKSRYB105K10
	C 7745-7747		ACH1454

Block Name: IO 1 BLOCK(EU)

SEMICONDUCTORS

	IC 7851		MAX3232CPW
	Q 7816,7821,7822		2SD2114K
	Q 7817,7823		UMD2N
	Q 7891		HN1B04FU
	D 7851		1SS301
	TH 7891		TH05-3H103F

MISCELLANEOUS

	L 7882	CHIP COIL (10 uH)	BTH1103
⚠	F 7811-7813,7871-7874	INDUCTOR	CTF1557
	JA 7802	JACK	VKN1449
	JA 7803	2P VERTICAL PIN JACK	AKB1331
	JA 7804	3P PINJACK VERTICAL	AKB1354
	JA 7805	3P VERTICAL PINJACK	AKB1332
	JA 7851	9P D-SUB SOCKET	AKP1329
	JA 7871	4POLE MINI JACK	AKN1081
	JA 7881	VERT OPT.LINK OUT	AKN1082

RESISTORS

	R 7801-7803		RS1/10SR75R0F
	R 7827,7828		RS1/10SR221J
	R 7860		RAB4CQ101J
	R 7891		RS1/10SR4701F
	Other Resistors		RS1/16SS###J

CAPACITORS

	C 7801-7803,7811,7812		CKSRYB105K10
	C 7805,7851-7855,7892		CKSSYB104K10
	C 7813,7814		CKSRYB102K50
	C 7818,7823,7824		CKSSYB471K50
	C 7821,7822		CCG1205
	C 7831,7832,7881		CKSRYB105K10

Mark	No.	Description	Part No.
	C 7833,7834		CKSSYB102K50
	C 7871-7873		CKSSYB471K50
	C 7891		CKSSYB103K16

Block Name: POWER SUB BLOCK(EU)

SEMICONDUCTORS

	IC 7901		NJM2846DL3-05
	IC 7911		PQ200WNA1ZPH
	IC 7951		NJM2846DL3-18
	IC 7961		NJM78M12DL1A
	D 7901,7911,7951,7961		1SS352

RESISTORS

	R 7914		RS1/16SS4701F
	R 7915		RS1/16SS1501F
	Other Resistors		RS1/16SS###J

CAPACITORS

	C 7901,7951		CKSRYB105K10
	C 7902,7952		DCH1201
	C 7911,7914		DCH1165
	C 7961,7963		CEHVAW330M25
	C 7962		CKSRYB104K25
	C 7964		CKSSYB682K25

Block Name: AV SW BLOCK(EU)

SEMICONDUCTORS

	IC 8001		R2S11006FT
	Q 8001-8006		2SA1576A

MISCELLANEOUS

	L 8001-8003	CHIP BEEDS FILTER	BTX1042

RESISTORS

	R 8002		RS1/8SQ0R0J
	R 8019,8024,8052,8057		RS1/10SR510J
	R 8064,8069		RS1/10SR510J
	Other Resistors		RS1/16SS###J

CAPACITORS

	C 8002-8005,8007-8012		CKSRYB105K10
	C 8006,8025,8029		CKSSYF104Z16
	C 8014,8019,8020,8022		DCH1201
	C 8015-8017,8021,8023		CKSSYB104K10
	C 8024,8026,8028,8030		DCH1201
	C 8031		DCH1201

Block Name: RGB SW BLOCK(EU)

SEMICONDUCTORS

	IC 8101		R2S11001FT
	Q 8101		2SA1576A
	Q 8102,8103		HN1B04FU
	Q 8104		HN1C01FU

MISCELLANEOUS

	L 8101	CHIP BEEDS FILTER	BTX1042

RESISTORS

	R 8136-8138		RS1/16SS8201F
	R 8149-8151		RS1/16SS6801F
	R 8159		RAB4CQ101J
	R 8160		RAB4CQ0R0J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	8101,8104		CKSRYB474K10
C	8102,8103		CCSSCH680J50
C	8108-8110,8140-8142		CKSRYB105K10
C	8111-8124		CKSSYB103K16
C	8125-8127		CCSSCH221J50
C	8128,8134		DCH1201
C	8129,8132		CCG1205
C	8130,8131,8133		CKSSYB104K10
C	8135-8139		CKSSYB104K10

Block Name: MSP BLOCK(EU)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	8201		MSP5651M-QK-C3
IC	8311,8331,8351		NJM4565V
IC	8371		BH3544F
Q	8266		DTC124EUA
Q	8301		HN1A01FU
Q	8371		2SC4081

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠ X	8201	CRYSTAL (20.25 MHz)	ASS1217

RESISTORS

Mark	No.	Description	Part No.
R	8218		RAB4CQ471J
R	8391-8393		RS1/8SQ0R0J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	8215,8216,8241		CKSSYB473K16
C	8217,8261,8264,8265		CCSSCH560J50
C	8235-8238		CCG1205
C	8242,8245,8247,8252		CKSSYB103K16
C	8243,8246,8248,8255		DCH1201
C	8251,8253,8311,8312		DCH1165
C	8254,8256,8259,8263		CKSSYB103K16
C	8257,8258		CCSSCH120J50
C	8260,8262,8271,8275		DCH1201
C	8270,8272,8273,8276		CKSSYB103K16
C	8277,8279,8286,8288		DCH1201
C	8278,8280,8285,8287		CKSSYB103K16
C	8301,8302,8313		CKSSYB102K50
C	8321,8322,8341,8342		DCH1201
C	8323,8324,8343,8344		CCSSCH150J50
C	8331,8332		DCH1165
C	8333		CKSSYB682K25
C	8351,8352,8355,8356		CKSSYB472K16
C	8360,8362,8378		DCH1201
C	8361,8363,8377		CKSSYB104K10
C	8371,8372,8380		CKSRYB105K10
C	8379		ACH1465

Block Name: D-AMP BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	8401		TAS5122DCA
Q	8485,8486		2SA1576A
Q	8488		DTC124EUA
D	8401		UDZS3R6(B)
D	8551-8554		UDZS30(B)

MISCELLANEOUS

Mark	No.	Description	Part No.
L	8451,8452	INDUCTOR (10 uH)	ATH1252
⚠ F	8551,8552	COMMON MODE FILTER	ATF1224
JA	8551	SPEAKER TERMINAL 4P	AKE1065

RESISTORS

Mark	No.	Description	Part No.
R	8401-8404,8409-8412		ACN1269
R	8405-8408		ACN1276
R	8421-8424,8445		RS1/16SS0R0J
R	8433		RS1/16SS101J
R	8434,8481-8487		RS1/16SS103J
R	8436		RS1/16SS183J
R	8437		RS1/16SS472J
	Other Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
C	8401-8408		CKSRYB224K16
C	8409-8416		CKSRYB681K50
C	8417-8424		CKSRYB683K16
C	8431,8432		BCG1060
C	8433,8434,8443-8446		CKSRYB104K25
C	8441,8442		CEHAZL152M25-P35
C	8451-8454		CFTLA104J50
C	8455,8456		CFTLA474J50
C	8457-8464		CKSRYB223K50
C	8487		ACH1338
C	8541,8542		CEHAT1R0M50
C	8555-8558		CKSRYB682K50
C	8561-8564		CKSRYF104Z50
C	8571-8578		CCSRCH221J50

Unit Name: SIDE IO ASSY(EU)

MISCELLANEOUS

Mark	No.	Description	Part No.
JA	8601	PIN JACK(3P)	AKB1303
JA	8602	JACK	AKN1083
CN	8601	11PIN CONNECTOR	AKM1438
	8603	SCREW TERMINAL	VNE1949

RESISTORS

Mark	No.	Description	Part No.
R	8601,8602		RST1/2SP120J
R	8693		RS1/10SR0R0J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	8601,8602		ACH1454
C	8603,8604		CKSSYB102K50

Unit Name: SIDE KEY ASSY

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠ L	8701-8704	CHIP SOLID INDUCTOR	QTL1013
S	8701-8706	PUSH SWITCH	CSG1155
CN	8701	4PIN CONNECTOR	AKM1431

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	8701		CKSSYB104K10

Unit Name: LED ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
D	8721		SMLE12BC7T(NP)
D	8722		TLRV1022
D	8723		SML-511DW(QR)

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN 8721	6PIN CONNECTOR	AKM1425

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8722,8723,8726		CKSSYB103K16

Unit Name: IR ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q 8751		2SA1576A
	D 8751		DAN217U

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	F 8751,8752	INDUCTOR	CTF1557
	CN 8751	CONNECTOR	AKM1289
	U 8751	REMOTE RECEIVER UNIT	GP1UE28QK0VF

RESISTORS

Mark	No.	Description	Part No.
	R 8753		RS1/10SR0R0J
	R 8755		RS1/10SR470J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8751		CEVW470M6R3
	C 8752		CKSSYB104K10
	C 8753		CKSSYB102K50
	C 8754		CKSRYB103K50
	C 8755		CCSRCH101J50

Unit Name: FAN CONNECT ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q 8761,8762		DTC124EUA
	D 8761,8762		1SS301

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN 8761	PLUG(4P)	KM200NA4
	CN 8762	PLUG(6P)	KM200NA6
	CN 8763	PLUG(7P)	KM200NA7

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/16SS###J

Unit Name: RLS ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 8736		MM3012XN
	IC 8737		AMS124YD01

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	F 8736-8738	INDUCTOR	CTF1557
	CN 8736	3PIN CONNECTOR	AKM1422

RESISTORS

Mark	No.	Description	Part No.
	R 8737		RS1/16SS2203F
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8736		CKSRYB105K10
	C 8737		CKSSYB103K16
	C 8738		DCH1201
	C 8739,8740		CKSSYB104K10

Unit Name: POWER SW ASSY

MISCELLANEOUS

Mark	No.	Description	Part No.
	S 8776	PUSH SW	ASG1102
	CN 8776	3PIN CONNECTOR	AKM1363

Unit Name: MAIN ASSY(EU HD)

MISCELLANEOUS

Mark	No.	Description	Part No.
	4000	HEAT SINK-A	ANH1717
	4000	THERMAL SHEET B	AEB1417

Block Name: BOARD IF 0 BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q 4001		2SA1576A
	D 4001,4002		1SS352
	D 4003-4008		1SS301

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN 4001,4003	50P CONNECTOR	AKM1399
	CN 4004	40P CONNECTOR	AKM1398
	CN 4005	CONNECTOR 7P	AKP1320

RESISTORS

Mark	No.	Description	Part No.
	R 4006		RS1/10SR0R0J
	R 4009-4011,4014,4015		RAB4CQ220J
	R 4013,4016		RAB4CQ101J
	R 4020-4023		RAB4CQ220J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 4003		ACH1421
	C 4004-4008		CKSRYB104K16

Block Name: BOARD IF 0 BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	D 4101		1SS301

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	L 4101,4102	CHIP BEEDS FILTER	BTX1042
	F 4101-4104	FERRITE CORE	VTF1091
	CN 4101,4102,4106	50P CONNECTOR	AKM1399
	CN 4104	80P CONNECTOR RCPT	BKP1159
	CN 4105	40P CONNECTOR	AKM1398
	CN 4107	CONNECTOR	AKM1276

RESISTORS

Mark	No.	Description	Part No.
	R 4112,4113		RAB4CQ101J
	Other Resistors		RS1/16SS###J

Block Name: BOARD IF 2 BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q 4201,4205-4207,4211		DTC124EUA
	Q 4202		RN1902
	Q 4215		HN1A01FU
	Q 4216		RN2902
	Q 4217		DTC124EUA
	D 4202,4204		1SS352

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 4202	CHIP BEEDS FILTER	BTX1039
⚠	F 4201-4212	INDUCTOR	CTF1557
	CN 4202	PLUG(4P)	KM200NA4

Mark	No.	Description	Part No.
	CN 4204	PLUG(9P)	KM200NA9
	CN 4207	PLUG(14P)	KM200NA14
	CN 4208	PLUG(7P)	KM200NA7
	CN 4209	PLUG(10P)	KM200NA10
	CN 4210	PLUG(15P)	KM200NA15
RESISTORS			
	R 4140-4145,4221		RS1/8SQ0R0J
	R 4222-4224,4249		RS1/10SR0R0J
	R 4251,4253		RS1/10SR102J
	Other Resistors		RS1/16SS###J
CAPACITORS			
	C 4207		CKSRYB102K50
	C 4211		CCSSCH221J50
	C 4214		DCH1201
	C 4216		CKSSYB104K10
Block Name: POWER 0 BLOCK(EH)			
SEMICONDUCTORS			
	IC 4301		R5523N001B
	IC 4303		PQ200WNA1ZPH
	IC 4304		MB3842PFV-G-E1
	IC 4305		NJM2846DL3-05
	IC 4306		BD8903FV
	Q 4304,4305		DTA143EUA
	Q 4307		2SA1576A
	Q 4308		UMD2N
	Q 4309,4310		DTC124EUA
	D 4301		RB521S-40
	D 4305,4316		1SS352
	D 4306		RB551V-30
MISCELLANEOUS			
	L 4302	CHIP BEEDS FILTER	BTX1039
	L 4303	INDUCTOR (47 uH)	BTH1111
	L 4306	CHIP COIL (470 uH)	BTH1126
RESISTORS			
	R 4301,4339		RS1/8SQ0R0J
	R 4310		RS1/10SR0R0J
	R 4325		RS1/16SS3901F
	R 4326		RS1/16SS1003D
	R 4327		RS1/16SS2202F
	R 4353		RS1/16SS2201F
	R 4356		RS1/16SS5101F
	R 4357		RS1/16SS2701F
	Other Resistors		RS1/16SS###J
CAPACITORS			
	C 4305,4308		CKSRYB105K10
	C 4306,4331		BCG1064
	C 4310,4327,4345		DCH1201
	C 4311		ACG1147
	C 4323		CEHVAW101M6R3
	C 4326		ACH1421
	C 4332,4335,4347-4349		CKSSYB104K10
	C 4338		CKSSYB473K16
	C 4350,4351		DCH1165
Block Name: POWER 1 BLOCK(EH)			
SEMICONDUCTORS			
	IC 4401,4406		MM1593DF
	IC 4402		BD8606FV

Mark	No.	Description	Part No.
	IC 4404		NJM2846DL3-33
	Q 4401,4402		UMD2N
	Q 4404-4407		DTC124EUA
	Q 4408		2SC4081
	Q 4409,4410		DTA124EUA
	Q 4411		RSS100N03
	Q 4412,4415		RTQ045N03
	Q 4413		UPA1917TE
	Q 4416		RSS090P03
	Q 4417,4418		SP8M4
	D 4401,4402,4410,4411		1SS352
	D 4405-4407		RB060M-30
MISCELLANEOUS			
	L 4401-4406	CHIP BEEDS FILTER	BTX1039
	L 4409-4411	INDUCTOR (2.8 uH)	ATH1243
	L 4413-4416	CHIP BEEDS FILTER	BTX1039
RESISTORS			
	R 4406,4438		RS1/16SS1203D
	R 4407,4425-4427,4441		RS1/16SS3302D
	R 4421		RS1/16SS5602D
	R 4429		RS1/16SS2702D
	R 4440		RS1/16SS1002D
	R 4442		RS1/16SS3902D
	R 4444,4445		RS1/16SS3302D
	R 4488		RS1/8SQ0R0J
	Other Resistors		RS1/16SS###J
CAPACITORS			
	C 4401,4458,4516		CKSRYB104K16
	C 4402,4413,4414,4421		DCH1201
	C 4403-4406,4409,4410		DCH1165
	C 4407,4455,4457		CKSRYB682K50
	C 4411		CCG1232
	C 4415,4417,4431,4432		CCSSCH101J50
	C 4418,4425,4426,4433		CKSSYB104K10
	C 4420,4444		CKSSYB471K50
	C 4422		DCH1201
	C 4423,4427,4465		CKSRYB105K10
	C 4434		CKSSYB104K10
	C 4435		CCSSCH470J50
	C 4436,4439		CKSSYB152K50
	C 4437		CCSSCH101J50
	C 4438		CCSSCH330J50
	C 4440		CKSSYB682K25
	C 4441		CKSSYB221K50
	C 4447,4448,4451,4452		BCG1059
	C 4454		CKSRYB334K10
	C 4462-4464,4466-4468		BCG1059
Block Name: POWER 2 BLOCK(EH)			
SEMICONDUCTORS			
	IC 4501		LTC3407EMSE-2
	IC 4503,4504		NJM2846DL3-18
	Q 4501,4507,4509		UPA1917TE
	Q 4502,4503		DTC124EUA
	Q 4504,4521		2SC4081
	Q 4506		RSS090P03
	Q 4510,4522-4524		RTQ045N03
	Q 4511-4513,4516		UMD2N
	D 4503,4509		1SS352
	D 4505		1SS357

Mark	No.	Description	Part No.
D	4510,4511		RB551V-30

MISCELLANEOUS

L	4501	CHIP BEEDS FILTER	BTX1039
L	4502,4503	CHIP INDUCTOR (2.2 uH)	ATH1244

RESISTORS

R	4554		RS1/16SS1503D
R	4558		RS1/16SS1003D
R	4561		RS1/16SS2003D
R	4562		RS1/16SS6202D
		Other Resistors	RS1/16SS###J

CAPACITORS

C	4501-4504,4508		CKSRYB104K16
C	4505,4506		CKSRYB105K10
C	4510,4513		BCG1059
C	4517		CKSSYB102K50
C	4518,4519		CCSSCH470J50
C	4521		CKSSYB103K16
C	4522,4523,4526-4528		CCSSCH101J50
C	4524		CKSRYB224K16
C	4525,4536-4539,4556		CKSSYB104K10
C	4529,4531,4548,4549		DCH1201
C	4533,4551,4555,4557		CCSSCH101J50
C	4559,4560		CKSSYB104K10

Block Name: VDEC BLOCK(EH)

SEMICONDUCTORS

IC	4701		HY57V641620FTP-6
IC	4702		CM0048BF
Q	4701,4702		2SA1576A

MISCELLANEOUS

L	4701	CHIP BEEDS FILTER	BTX1042
L	4702,4703	COIL	LCYC6R8K2125
L	4706-4708	CHIP BEEDS FILTER	BTX1042
⚠ X	4701	CRYSTAL (28.63636 MHz)	ASS1214

RESISTORS

R	4702,4703		RS1/8SQ0R0J
R	4710,4720		RS1/16SS1500F
R	4711,4721		RS1/16SS2201F
R	4712,4722		RS1/16SS1101F
R	4713,4715,4723		RS1/16SS2701F
R	4714		RS1/16SS1001F
R	4726,4737-4745		RAB4CQ470J
R	4746-4752		RAB4CQ101J
		Other Resistors	RS1/16SS###J

CAPACITORS

C	4701,4704-4711		CKSRYB105K10
C	4702,4703		CCSRCH300J50
C	4712,4718,4720		CKSSYB103K16
C	4713,4717		CCSSCH330J50
C	4714,4719		CCSSCH680J50
C	4715,4716		CKSSYB102K50
C	4721		CEHVAW101M6R3
C	4722-4736,4738-4774		CKSSYB104K10
C	4737,4793-4797		DCH1201
C	4787		CKSSYB104K10
C	4792		DCH1165

Mark	No.	Description	Part No.

Block Name: ADC BLOCK(EH)

SEMICONDUCTORS

IC	4801		AD9985KSTZ-110

MISCELLANEOUS

L	4801,4802	CHIP BEEDS FILTER	BTX1042

RESISTORS

R	4803		RS1/8SQ0R0J
R	4804		RS1/16SS2701F
R	4809-4814		RAB4CQ220J
R	4815		RAB4CQ103J
		Other Resistors	RS1/16SS###J

CAPACITORS

C	4801		CKSSYB823K10
C	4802		CKSSYB822K16
C	4803-4805,4807,4809		CKSSYB104K10
C	4806,4808,4810		CKSSYB473K16
C	4811-4817		CKSSYB104K10
C	4818-4820		DCH1201

Block Name: HDMI BLOCK(EH)

SEMICONDUCTORS

IC	4901		SII9125CTU
Q	4903		2SC4081
Q	4904-4907,4914		UMD2N
Q	4908		RN1902
Q	4910		2SA1576A
Q	4913		HN1C01FU
Q	4915		DTC124EUA
D	4901		RB520S-30

MISCELLANEOUS

L	4901-4905	CHIP SOLID INDUCTOR	QTL1013
F	4901,4902	CHIP FERRITE BEADS	ATF1211
⚠ X	4901	CRYSTAL (28.322 MHz)	ASS1226

RESISTORS

R	4901,4902		RS1/8SQ0R0J
R	4944		RAB4CQ100J
R	4945-4954		RAB4CQ220J
R	4973		RAB4CQ470J
R	4976-4979		ACN1275
		Other Resistors	RS1/16SS###J

CAPACITORS

C	4901-4928,4932,4933		CKSSYB102K50
C	4929		CKSSYB103K16
C	4930,4931		CCSSCH8R0D50
C	4934,4937-4940		CKSSYB104K10
C	4936,4941,4946,4951		DCH1201
C	4942-4945,4947-4950		CKSSYB104K10
C	4952-4960		CKSSYB104K10

Block Name: HDMI SW BLOCK(EH)

SEMICONDUCTORS

IC	5001		CXB1444R
IC	5002-5004		BR24L02FV-W
Q	5007-5009		UMD2N
Q	5011-5013		RN1902
D	5004-5006		UDZS6R8(B)

MISCELLANEOUS

Mark	No.	Description	Part No.
F	5001	CHIP SOLID INDUCTOR	DTL1041
JA	5001-5003	HDMI CONNECTOR(VT)	AKP1335

RESISTORS

Mark	No.	Description	Part No.
R	5018,5029,5050		RS1/16SS49R9F
R	5058		RS1/16SS4701F
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	5001		BCG1059
C	5003-5007,5009-5013		CKSSYB104K10
C	5014		DCH1201
C	5015,5016,5018,5019		CKSSYB104K10

Block Name: DVB T TUNER BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	5301		TC7W66FU
Q	5303		DTC124EUA
Q	5304,5305		2SA1576A
Q	5306		HN1B04FU
Q	5307		HN1C01FU
Q	5308		RN1902
D	5301		1.5SMC6.8A

MISCELLANEOUS

Mark	No.	Description	Part No.
L	5301,5303,5304	CHIP COIL	BTH1121
L	5308	CHIP BEEDS FILTER	BTX1042
F	5301-5304	FERRITE CORE	VTF1080
F	5305	FERRITE CORE	VTF1091
⚠ U	5301	FE	AXF1191

RESISTORS

Mark	No.	Description	Part No.
R	5304,5307,5309		RS1/8SQ0R0J
R	5318,5360-5362		RS1/10SR0R0J
R	5364-5369,5372		RS1/10SR0R0J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	5307,5311,5324,5330		DCH1201
C	5309		CKSSYB104K10
C	5316		CKSSYB103K16
C	5319		CEHVAW101M6R3
C	5322		CKSRYB682K50
C	5329		BCG1064

Block Name: COFDM BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	5401		DRX3975D-QI-B1
Q	5402		UMD2N

MISCELLANEOUS

Mark	No.	Description	Part No.
L	5401-5403	CHIP BEEDS FILTER	BTX1042
L	5404	CHIP COIL	LCYAR82J2520
F	5402-5404	FERRITE CORE	VTF1091
⚠ X	5401	CRYSTAL RESONATOR (20 MHz)	VSS1221

RESISTORS

Mark	No.	Description	Part No.
R	5401		RS1/8SQ0R0J
R	5434-5436		RAB4CQ470J
R	5438		RAB4CQ471J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	5401,5402		CCSSCH101J50
C	5403		CKSRYB104K16
C	5404,5417,5419,5420		CKSSYB104K10
C	5408		CCSSCJ3R0C50
C	5409		CCSSCH180J50
C	5411,5412		CKSSYB103K16
C	5415,5416		CCSSCH8R0D50
C	5418,5421,5427,5429		CKSSYB102K50
C	5422,5424		CCG1205
C	5423,5425,5426,5428		CKSSYB104K10
C	5430		CKSSYB104K10

Block Name: COMMON IF BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	5601,5602,5605,5606		TC74LCX541FTS1
IC	5604		TC74LCX245FTS1
IC	5608		TC74LCX541FTS1

RESISTORS

Mark	No.	Description	Part No.
R	5614,5615,5617,5618		RAB4CQ151J
R	5619,5625		RAB4CQ101J
R	5620,5624,5626		RAB4CQ470J
R	5622		RS1/10SR0R0J
R	5627,5628,5632,5636		RAB4CQ103J
R	5629-5631		RAB4CQ470J
R	5633		RS1/8SQ0R0J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	5601-5603,5605,5606		CKSSYB104K10
C	5608		CKSSYB104K10

Block Name: VBI SLICER BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	5701		TC90173FG
D	5701		HSM107S-E

MISCELLANEOUS

Mark	No.	Description	Part No.
L	5701,5702	CHIP BEEDS FILTER	BTX1042

RESISTORS

Mark	No.	Description	Part No.
R	5701		RS1/8SQ0R0J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	5701		CKSRYB474K10
C	5704		CCSSCH680J50
C	5705-5712,5715-5720		CKSSYB104K10
C	5714		DCH1201

Block Name: 7404 0 BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	6001		BCM7404XKPB11G

MISCELLANEOUS

Mark	No.	Description	Part No.
F	6001	FERRITE CORE	VTF1084
JA	6001	RJ45 CONNECTOR TRANS	AKP1332

RESISTORS

Mark	No.	Description	Part No.
R	6002-6004,6018		RS1/10SR750J
R	6007-6009,6016,6045		RAB4CQ470J
R	6014		RS1/16SS1101F
R	6019		RS1/16SS1001F
R	6021,6022,6039,6040		RS1/16SS49R9F
R	6037		RS1/16SS1002F
R	6051,6071		RAB4CQ472J
R	6066-6069,6072		RAB4CQ470J

Mark	No.	Description	Part No.
R	6070		RAB4CQ221J
R	6073		RS1/10SR75R0F
R	6079-6084		RAB4CQ680J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	6001		CKSSYB102K50
C	6004		CCSSCH150J50
C	6008,6015,6016		DCH1201
C	6009-6011,6013,6014		CKSSYB104K10

Block Name: 7404 1 BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	6102		LP2995M

MISCELLANEOUS

Mark	No.	Description	Part No.
L	6101	INDUCTOR	LCTAW2R2J2520
L	6103	CHIP BEEDS FILTER	BTX1042
L	6111-6118	CHIP BEEDS FILTER	BTX1042
F	6101-6113	FERRITE CORE	VTF1084
⚠ X	6101	CRYSTAL RESONATOR (54 MHz)	BSS1134

RESISTORS

Mark	No.	Description	Part No.
R	6133,6134		RS1/10SR3010F
R	6156,6157		RAB4CQ472J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	6101,6102,6180-6183		BCG1059
C	6103,6104		CCSSCH120J50
C	6105,6106,6109-6112		CKSSYB103K16
C	6113,6114		CCSSCH8R0D50
C	6115,6118-6120,6123		CKSSYB103K16
C	6116,6117,6188,6189		ACG1122
C	6121,6122,6125,6128		CKSSYB102K50
C	6124,6126,6127		CKSSYB103K16
C	6129,6134,6135		CKSSYB102K50
C	6130-6133		CKSSYB103K16
C	6136,6137		CEHVAW331M6R3
C	6139-6158,6161-6164		CKSSYB104K10
C	6159,6160,6165,6168		DCH1201
C	6166,6167,6170-6173		CKSSYB104K10
C	6169,6174,6175,6187		DCH1201
C	6176-6179,6184-6186		CKSSYB104K10
C	6190		CCG1232
C	6191,6192		CKSSYB104K10

Block Name: 7404 DDR BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	6201-6204		EDD5116AFTA-5B-E

MISCELLANEOUS

Mark	No.	Description	Part No.
L	6201,6202	CHIP BEEDS FILTER	BTX1042

RESISTORS

Mark	No.	Description	Part No.
R	6259-6262,6283		RAB4CQ510J
R	6263,6267-6269		RAB4CQ220J
R	6264-6266,6270,6284		RAB4CQ101J
R	6271-6282,6286-6290		RAB4CQ220J
R	6285,6291-6295,6301		RAB4CQ101J
R	6296-6300,6302-6309		RAB4CQ220J
R	6310,6311,6315,6316		RAB4CQ101J
R	6312-6314		RAB4CQ220J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	6201-6204		CKSSYB471K50
C	6205		BCG1059
C	6207,6208,6210-6222		CKSSYB104K10
C	6209,6223,6249		DCH1201
C	6224-6248,6250-6253		CKSSYB104K10

Block Name: 7404 FLASH BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	6401		TC74VHC02FTS1
IC	6402		PST3628UR
D	6401		1SS352

RESISTORS

Mark	No.	Description	Part No.
R	6457-6466		RAB4CQ472J
R	6467		RAB4CQ103J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	6401		CKSSYB103K16
C	6402-6405		CKSSYB104K10
C	6406		CKSSYB473K16

Block Name: ARIA 0 BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	6501		PD6568A

MISCELLANEOUS

Mark	No.	Description	Part No.
L	6501-6503	CHIP BEEDS FILTER	BTX1042
L	6504,6505	CHIP BEEDS FILTER	BTX1039
L	6506-6509	INDUCTOR	LCYC1R0K1608
⚠ X	6501	CRYSTAL (27 MHz)	ASS1225

RESISTORS

Mark	No.	Description	Part No.
R	6501-6504		RS1/10SR0R0J
R	6506		RAB4CQ220J
R	6514,6515		RAB4CQ103J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	6501,6504-6513,6518		CKSSYB104K10
C	6502,6514,6523		DCH1201
C	6517		CCG1232
C	6525-6528		CKSSYB104K10
C	6576		CCSSCH120J50
C	6577		CCSSCH150J50
C	6578,6580-6587		CKSRYB105K10
C	6589-6608,6610-6614		CKSRYB105K10

Block Name: ARIA 1 BLOCK(EH)

RESISTORS

Mark	No.	Description	Part No.
R	6602		RS1/8SQ0R0J
R	6603,6604,6607		RS1/16SS2201F
R	6609-6611		RS1/16SS2201F
R	6613-6627,6629,6630		RAB4CQ220J
R	6628		RAB4CQ121J
		Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
C	6615		DCH1201
C	6616-6629		CKSSYB104K10
C	6634		CKSRYB105K10

Block Name: ARIA MEMORY BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 6702-6704		EDD1232ABBH-5C-E

RESISTORS

Mark	No.	Description	Part No.
	R 6701-6703		RS1/8SQ0R0J
	R 6745-6780		RAB4CQ470J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 6701-6707		CKSSYB104K10
	C 6708,6710,6712,6714		DCH1201
	C 6718		CKSSYB103K16
	C 6722-6745		CKSRYB105K10

Block Name: IF UCOM BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 6801		PST3628UR
	IC 6802-6804		TC74VHC126FTS1
	IC 6806		TC74VHC00FTS1
	Q 6801-6803,6813,6814		DTC124EUA
	Q 6804,6805		2SC4081
	Q 6806,6807,6811		2SA1576A
	Q 6808		DTA124EUA
	Q 6809,6810		HN1C01FU
	Q 6812		RN1902
	D 6801-6805		1SS352

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	X 6801	CERAMIC OSCILLATOR	CSS1616
⚠	X 6802	CRYSTAL OSCILLATOR (32.768 kHz)	ASS1212

RESISTORS

Mark	No.	Description	Part No.
	R 6802		RS1/8SQ0R0J
	R 6880,6885		RAB4CQ103J
	R 6883		RAB4CQ473J
	R 6884		RAB4CQ471J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 6801		CKSSYB102K50
	C 6802		CKSSYB472K16
	C 6803,6804		CKSSYB471K50
	C 6805,6806		CCSSCH8R0D50
	C 6807,6809,6814		CKSSYB104K10
	C 6808,6825		DCH1201
	C 6810		CKSSYB103K16
	C 6817-6824		CKSSYB104K10

Block Name: EMMA2 BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 7002		TC74VHC08FTS1
	IC 7003		UPD61123F1-100KA3A
	IC 7004		BR24L64F-W
	IC 7005		TC7WHU04FU
	IC 7006		TC74HC4066AFT
	Q 7001		2SJ461A
	Q 7002,7003		DTC124EUA
	Q 7005		SSM6N17FU
	Q 7010		UMD2N
	D 7010		1SS301

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 7001,7002	CHIP BEEDS FILTER	BTX1042
	F 7001	FERRITE CORE	VTF1091
⚠	X 7001	CRYSTAL (27 MHz)	ASS1225

RESISTORS

Mark	No.	Description	Part No.
	R 7001		RS1/8SQ0R0J
	R 7026-7028		RS1/16SS2000D
	R 7029,7036		RS1/16SS6200D
	R 7033		RS1/16SS3300D
	R 7035		RS1/16SS2200D
	R 7060-7066,7068,7071		RAB4CQ680J
	R 7067,7070,7073,7074		RAB4CQ103J
	R 7069,7083,7084		RAB4CQ101J
	R 7072		RAB4CQ221J
	R 7075		RAB4CQ220J
	R 7081		RAB4CQ222J
	R 7087-7091		RAB4CQ101J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 7001,7003-7011		CKSRYB105K10
	C 7014		CKSSYB102K50
	C 7029,7030		CCSSCH100D50
	C 7031,7032		CCSSCH470J50
	C 7035-7040,7043		CKSSYB104K10
	C 7041,7044,7049		DCH1201
	C 7045-7048,7050,7051		CKSSYB104K10
	C 7053		CKSSYB103K16

Block Name: EMMA2 MEM. BLOCK(EH)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 7201		EDD5116AFTA-5B-E
	IC 7203		LP2995M

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 7201	CHIP BEEDS FILTER	BTX1042

RESISTORS

Mark	No.	Description	Part No.
	R 7213		RS1/16SS1500F
	R 7243-7246		RAB4CQ680J
	R 7247-7254,7256		RAB4CQ220J
	R 7255,7267		RAB4CQ103J
	R 7260,7261,7268-7270		RAB4CQ560J
	R 7272-7275		RAB4CQ101J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 7201		CKSRYB105K10
	C 7202-7204		BCG1059
	C 7205,7206,7225		DCH1201
	C 7207-7219,7223		CKSSYB104K10
	C 7226		CEHVAW331M6R3

Unit Name: CARD ASSY(EU HD)

Block Name: BOARD IF CARD BLOCK

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN 8801	L-PLUG(9P)	KM200NA9L
	CN 8803,8804	50P CONNECTOR	AKM1399

RESISTORS

Mark	No.	Description	Part No.
	R 8806,8807		RAB4CQ221J
	Other Resistors		RS1/16SS###J

Block Name: POWER CARD 0 BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 8901		LNBH23PP/1B
	IC 8902		BD8624EFV
	IC 8903,8904		MM1593DF
	IC 8908,8909		AAT4610AIGV-1
	Q 8902,8910-8913		RT1N241M
	Q 8903		2SC4081
	Q 8907		RT1P241M
	Q 8908		RT3T22M
	Q 8909		RTQ045N03
	D 8901		1SS352
	D 8910		D1FM3
	D 8911,8912		RB520S-30
	D 8913		RB060M-30
	D 8914		TDZ5R1

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 8901	CHIP INDUCTOR (2.2 uH)	ATH1244
	L 8902	CHIP BEEDS FILTER	BTX1042
	L 8903	CHIP BEEDS FILTER	BTX1039
	L 8904	INDUCTOR	CTH1254
	L 8906	INDUCTOR	ATH1235
	L 8980	INDUCTOR (270 uH)	ATH1242

RESISTORS

Mark	No.	Description	Part No.
	R 8901,8905-8909,8964		RS1/8SQ0R0J
	R 8911,8919		RS1/4SA101J
	R 8918		RS1/4SA150J
	R 8944		RS1/16SS1003D
	R 8945,8948		RS1/16SS3302D
	R 8967,8968		RS1/8SQ0R0J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8901-8903		ACH1495
	C 8904-8906,8913		CKSRYB104K50
	C 8907,8908		CKSRYB104K25
	C 8909,8912		CKSRYB224K16
	C 8911		CKSRYB682K50
	C 8916,8917,8923,8924		CKSRYB105K10
	C 8921,8922		BCG1059
	C 8925,8926		CKSSYB103K25
	C 8928,8934		CKSSYB471K50
	C 8932		CKSSYB223K16
	C 8933,8958,8959,8963		CCSSCH101J50
	C 8937		CEHVAW100M35
	C 8942,8943,8951,8952		DCH1201
	C 8945,8949		DCH1165
	C 8947,8948		CKSRYB104K16
	C 8964		CCSSCH101J50
	C 8965,8966		CKSSYB104K10

Block Name: DVB S2 TUNER BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 9102		STV-0903
	D 9101		1.5SMC24A
	D 9103		RB060L-40

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 9101	CHIP BEEDS FILTER	BTX1042
	F 9101	FERRITE CORE	VTF1080
⚠	X 9101	CRYSTAL (27 MHz)	ASS1225
⚠	U 9101	FE	AXF1195

RESISTORS

Mark	No.	Description	Part No.
	R 9101,9120,9123		RS1/8SQ0R0J
	R 9116		RS1/10SR103J
	R 9148		RAB4CQ103J
	R 9149,9150		RAB4CQ470J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 9101,9159		BCG1059
	C 9102-9106,9113		CKSSYB103K16
	C 9114		CKSSYB102K50
	C 9116,9117		CCSSCH120J50
	C 9125-9136,9140-9154		CKSSYB103K16
	C 9155,9158		CEHVAW101M6R3
	C 9160-9163,9165		CKSSYB104K10
	C 9166-9179		CKSSYB103K16

Block Name: TS SELECT BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 9201-9203		TC74LCX157FTS1
	IC 9204,9205		TC74LCX541FTS1

RESISTORS

Mark	No.	Description	Part No.
	R 9203,9204		RAB4CQ473J
	R 9221,9224		RAB4CQ151J
	R 9226,9227		RAB4CQ470J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 9201-9205		CKSSYB104K10

Block Name: CIMAX BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 9301-9304		TC74VHCT373AFT
	IC 9305		TC74VHC08FTS1
	IC 9306		CIMAXSP2L
	IC 9307,9310,9313		TC74VHC32FTS1
	IC 9308,9309		TC74VHCT541AFTS1
	IC 9311,9312		TC74VHCT245AFTS1
	Q 9301-9304,9307,9308		RT1N241M

RESISTORS

Mark	No.	Description	Part No.
	R 9301,9302,9375		RS1/8SQ0R0J
	R 9336,9337		RAB4CQ103J
	R 9338,9355		RAB4CQ331J
	R 9339,9341,9345-9348		RAB4CQ470J
	R 9340,9343,9349,9351		RAB4CQ680J
	R 9342,9344		RAB4CQ151J
	R 9350,9352-9354,9357		RAB4CQ101J
	R 9356,9358-9374,9406		RAB4CQ470J
	R 9376-9383		RAB4CQ220J
	R 9384-9387		RAB4CQ104J
	R 9407,9410,9411		RAB4CQ470J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 9301		CKSSYB102K50
	C 9302-9304,9307,9308		CKSSYB104K10
	C 9305,9306		DCH1201
	C 9309,9316		CKSRYB105K10
	C 9310-9315,9318-9324		CKSSYB104K10

Mark No. Description Part No.

Block Name: CI SLOT BLOCK

MISCELLANEOUS

JA 9451,9452	PC CARD CONNECTOR	AKP1333

RESISTORS

All Resistors		RS1/16SS###J

CAPACITORS

C 9451,9452		CEHVAW470M16
C 9459,9460		DCH1201

Block Name: PC BLOCK

SEMICONDUCTORS

IC 9601		TC74VHC08FTS1
IC 9602		BR24L01AFJ-W
Q 9601		RT1N241M
D 9601		1SS301

MISCELLANEOUS

CN 9601	15P D-SUB SOCKET	AKP1214
CN 9602	FFC CONNECTOR 12P RA	AKM1388

RESISTORS

R 9605		RAB4CQ473J
R 9606,9607		RAB4CQ101J
R 9608		RAB4CQ222J
Other Resistors		RS1/16SS###J

CAPACITORS

C 9604		DCH1201
C 9605		CKSSYB104K10

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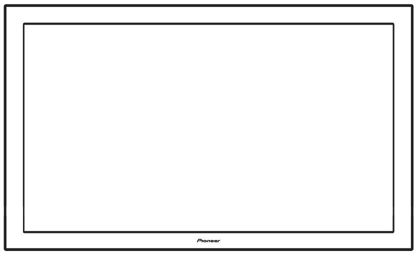
Service Manual


PDP-LX5090

ORDER NO.
ARP3480

FLAT SCREEN TV

PDP-LX5090

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-LX5090	WYSIXK5	AC 220 V to 240 V	
PDP-LX5090	WYS5	AC 220 V to 240 V	

For details, refer to "Important Check Points for good servicing".

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SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols ▮▭ (fast operating fuse) and/or ▮▭ (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible ▮▭ (fusible de type rapide) et/ou ▮▭ (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

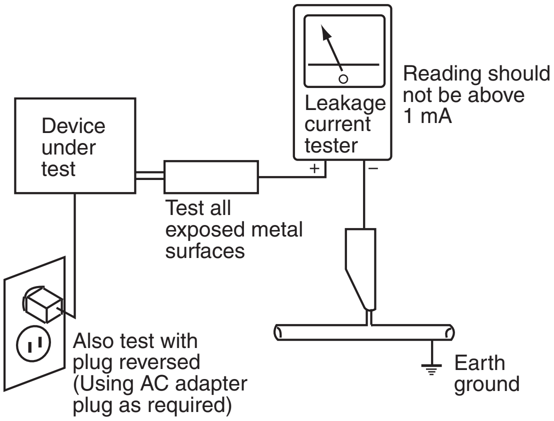
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 4 MΩ.
The below 4 MΩ resistor value indicate an abnormality which require corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 1 mA.


Device under test
Leakage current tester
+
−
Reading should not be above 1 mA
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
  Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.

- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 ºC.
  Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 ºC in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Do NOT use a soldering iron whose tip temperature cannot be controlled.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
  GYP1006 1.0 in dia.
  GYP1007 0.6 in dia.
  GYP1008 0.3 in dia.

1.2 CHARGED SECTION AND HIGH VOLTAGE GENERATING POINT

■ Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. Power Cord
2. AC Inlet
3. Power Switch
4. Fuse (In the POWER SUPPLY Unit)
5. STB Transformer and Converter Transformer
   (In the POWER SUPPLY Unit)
6. Other primary side of the POWER SUPPLY Unit

■ High Voltage Generating Point

The places where voltage is 100 V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.
The VSUS voltage remains for several minutes after the power to the unit is turned off. These places must not be touched until about 10 minutes after the power is turned off, or it is confirmed with a tester that there is no residual VSUS voltage.

If the procedures described in “5.6 [1] PANEL DRIVE-POWER ON/OFF FUNCTION” are performed before the power is turned off, the voltage will be discharged in about 30 seconds.

50F X DRIVE Assy	(205 V)
50F Y DRIVE Assy	(−280 V to 420 V)
50F SCAN A Assy	(−280 V to 420 V)
50F SCAN B Assy	(−280 V to 420 V)

▨ : Part is Charged Section.

☐ : Part is the High Voltage Generating Points other than the Charged Section.

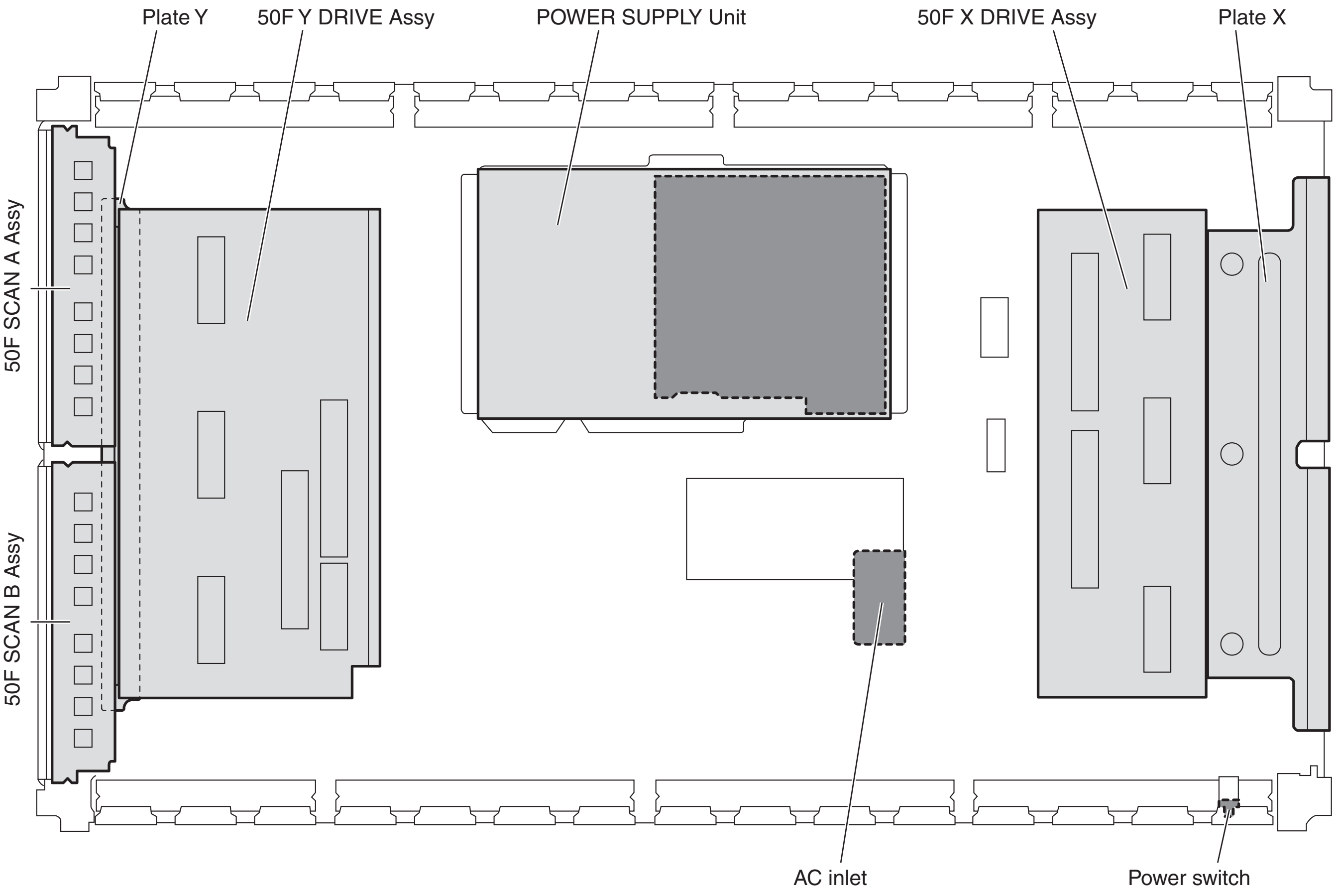
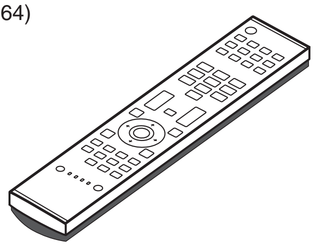


Fig. High Voltage Generating Point (Rear view)

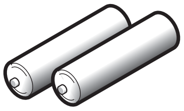
2. SPECIFICATIONS

2.1 ACCESSORIES

- Remote control unit
  (AXD1564)

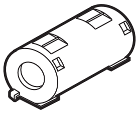


- Dry cell battery (R6, AA) (×2)
  (for remote control unit)

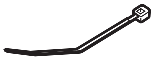


- Ferrite core
  (ATX1039)

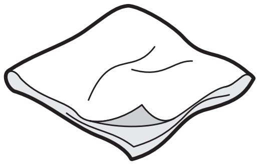
- Ferrite core



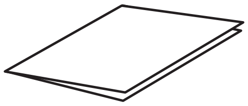
- Cable tie (for ferrite core)



- Cleaning cloth (AED1285)

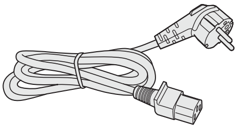


- Warranty card



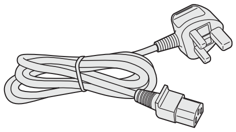
- Power cable
  Only the power cable appropriate for your country or region is supplied:

(ADG1214)



For Europe, except UK and Republic of Ireland

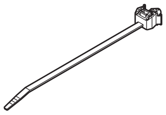
(ADG1223: WYSIXK5 only)



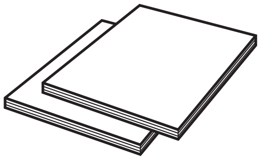
For UK and Republic of Ireland

- Binder Assy
  (AEC2158)

- Cable clamp (×4)



- Operating instructions (×2)
  (ARE1492: WYSIXK5 only)
  (ARC1606: WYSIXK5 only) or (ARC1618: WYS5 only)



2.2 SPECIFICATIONS

Item			50” flat screen TV, model: PDP-LX5090
Number of pixels			1920 x 1080 pixels
Audio amplifier			18 W + 18 W (1 kHz, 10 %, 6 Ω)
Sound Effect			SRS FOCUS/SRS/SRS TruBass/SRS Definition
Power Requirements			220 V to 240 V AC, 50 Hz/60 Hz, 420 W (0.3 W Standby)
Weight			33.5 kg (73.9 lbs.)
Colour System		Analogue	PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
		Digital	PAL/SECAM
TV Function (Analogue)	Receiving System		B/G, D/K, I, L, L’
	Tuner	VHF/UHF	E2–E69 ch, F1–F6 ch, I21–I69 ch, IR A–IR J ch
		CATV	Hyper-band, S1–S41 ch
	Auto Channel Preset		99 ch, Auto Preset, Auto Label, Auto Sort
	STEREO		NICAM/A2
TV Function (Digital)	Receiving System		DVB-T(2K/8K COFDM)
	Tuner	VHF/UHF	VHF Band III (170 MHz to 230 MHz) and UHF Band IV, V (470 MHz to 862 MHz)
	Auto Channel Preset		99 ch, Auto Preset, Auto Label, Auto Sort
	STEREO		MPEG layer I/II, Dolby Digital
Terminals	Rear	INPUT 1	SCART (AV in, RGB in, TV out), HDMI in ^{*1}
		INPUT 2	SCART (AV in/out, S-VIDEO in, AV link ^{*2}), Component Video in, AUDIO in
		INPUT 3	SCART (AV in/out, S-VIDEO in, RGB in, AV link^{*2}), HDMI in^{*1}
		INPUT 4	HDMI in^{*1}
		CONTROL OUT	1
		SPEAKERS	6 Ω to 16 Ω
		Antenna	75 Ω Din Type for VHF/UHF in
		PC INPUT	Analogue RGB in, Audio in
		AUDIO OUT	AUDIO out (Fixed)
		SUB WOOFER OUT	Variable
		DIGITAL OUT	Digital audio output (Optical)
		COMMON INTERFACE	CA Module
	Side	INPUT 5	VIDEO in, AV in
		USB	USB in^{*3}
		PHONES	16 Ω to 32 Ω recommended

^{*1} This conforms to HDMI1.3 (Deep Colour) and HDCP1.1. HDMI (High-Definition Multimedia Interface) is a digital interface that handles both video and audio using a single cable. HDCP (High-bandwidth Digital Content Protection) is a technology used to protect copyrighted digital contents that use the Digital Visual Interface (DVI).

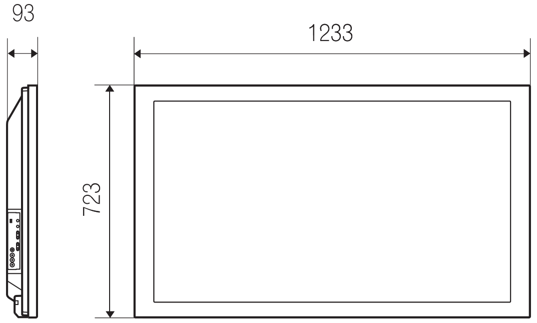
^{*2} Switchable from menu.

^{*3} This conforms to USB 1.1 and 2.0 specifications.

Design and specifications are subject to change without notice.

Dimensions

PDP-LX5090
Unit: mm

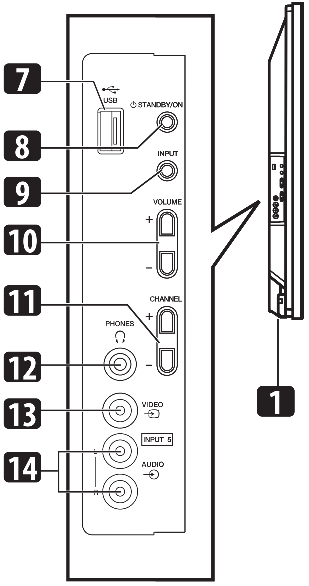


2.3 PANEL FACILITIES

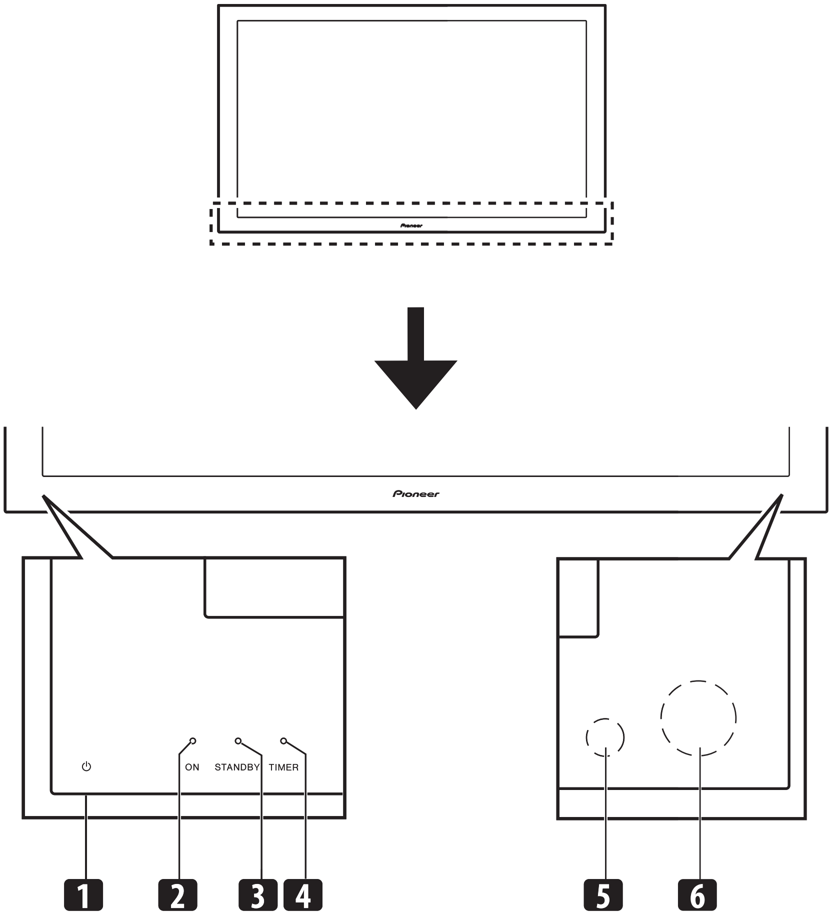
■ Front Section

(Front)

Side


7
USB
STANDBY/ON
8
INPUT
9
VOLUME
10
+
–
11
CHANNEL
PHONES
12
13
VIDEO
INPUT 5
14
AUDIO
1

(PDP-LX5090)


Pioneer
ON
STANDBY
TIMER
1
2
3
4
5
6

The terminals on side panels are common to the PDP-LX6090 and PDP-LX5090.

1 ⏻ button (This button is located at the bottom on the rear panel. (See 1 on page 13.) If the button is off, the power will not turn on even when ⏻, **0** to **9** on the remote control unit or **STANDBY/ON** on the flat screen TV is pressed. To turn on the power, press ⏻.)

2 POWER ON indicator

3 STANDBY indicator

4 TIMER indicator

- The TIMER indicator lights up when one or more DTV programmes are preset for watching or recording (see pages 47 to 49).

5 Room Light Sensor

6 Remote control sensor

7 USB port

8 **STANDBY/ON** button

9 **INPUT** button

10 **VOLUME +/–** buttons

11 **CHANNEL +/–** buttons

12 PHONES output terminal

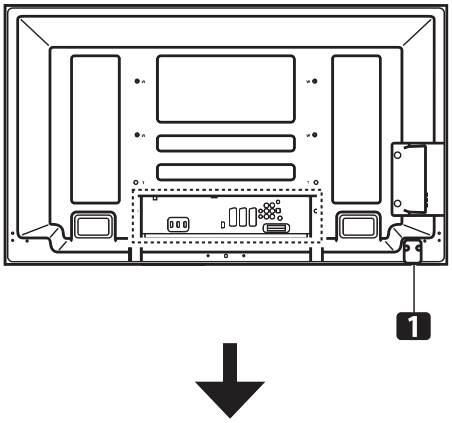
13 INPUT 5 terminal (VIDEO)

14 INPUT 5 terminals (AUDIO)

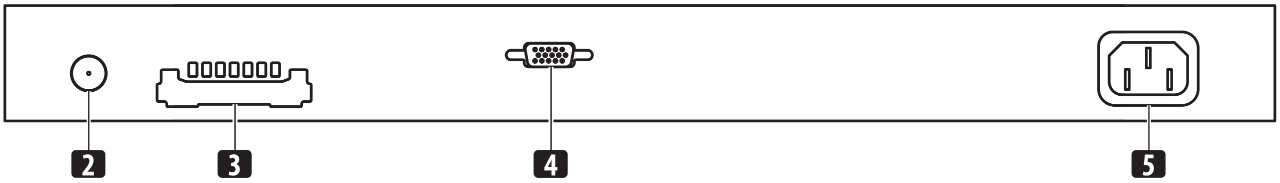
■ Rear Section

(Rear)

(PDP-LX5090)

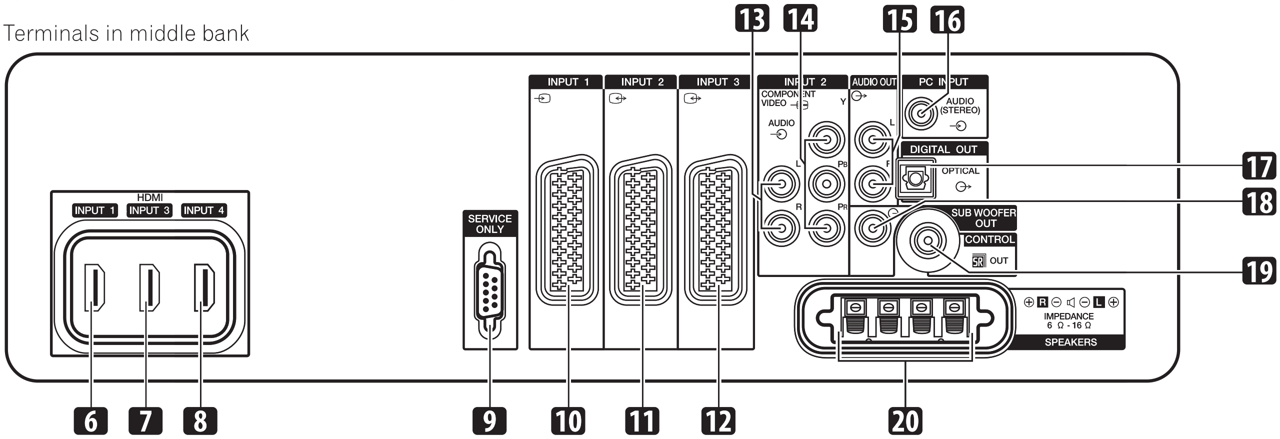


Terminals in upper bank



* For exact terminal positions, refer to the terminal position sheet located near the terminal compartment.

Terminals in middle bank


13
14
15
16
17
18
19
HDMI
INPUT 1
INPUT 3
INPUT 4
SERVICE ONLY
INPUT 1
INPUT 2
INPUT 3
INPUT 2
COMPONENT VIDEO
Y
AUDIO
L
R
PB
PR
AUDIO OUT
L
R
PC INPUT
AUDIO (STEREO)
DIGITAL OUT
OPTICAL
SUB WOOFER OUT
CONTROL
SR OUT
⊕ R ⊖ ⊖ L ⊕
IMPEDANCE
6 Ω - 16 Ω
SPEAKERS
6
7
8
9
10
11
12
20

The terminals on the rear panel are common to the PDP-LX6090 and PDP-LX5090.

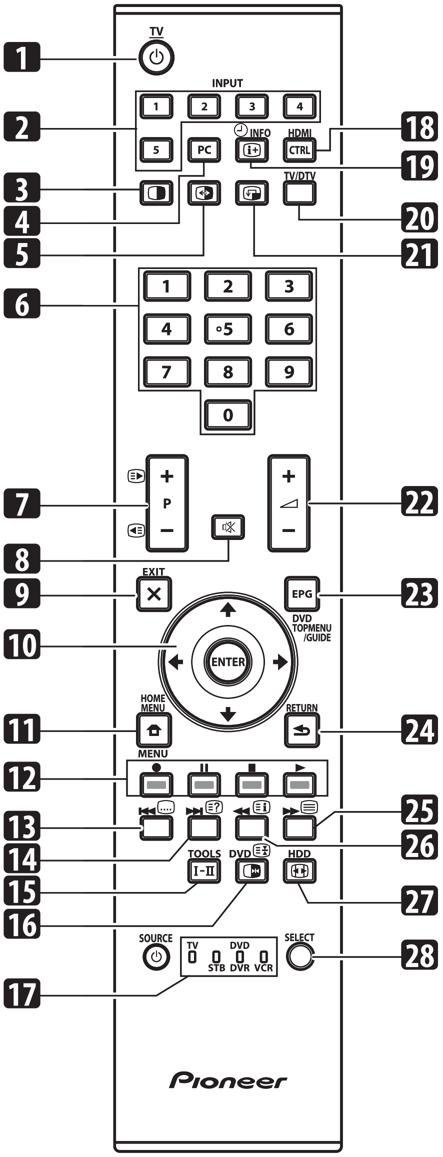
1 ⏻ button
2 ANT (Antenna) input terminal
- Power can be supplied through this terminal

3 COMMON INTERFACE slot
- For a CA Module with a smart card

4 PC INPUT terminal (Analogue RGB)
5 AC IN terminal
6 INPUT 1 terminal (HDMI)
7 INPUT 3 terminal (HDMI)
8 INPUT 4 terminal (HDMI)
9 RS-232C terminal (used for factory setup)
10 INPUT 1 terminal (SCART)
11 INPUT 2 terminal (SCART)
12 INPUT 3 terminal (SCART)
13 INPUT 2 terminals (Audio)
14 INPUT 2 terminals (COMPONENT VIDEO: Y, P_B, P_R)
15 AUDIO OUT terminals
16 PC INPUT terminal (Audio)
17 DIGITAL OUT terminal (OPTICAL)
18 SUB WOOFER OUT terminal
19 CONTROL OUT terminal (supports **SR+**)
20 SPEAKERS terminals (right/left)
- Do not connect any devices to the speaker terminals other than the speakers specified.
- Do not leave speaker cable wires bare and exposed at the terminals. Exposed wires can result in an electrical short causing malfunction or damage to the system.

■ Remote Control Unit

This section describes the functions of the buttons available when the TV mode has been selected by using the **SELECT** button.



1 **⏻TV:** Turns on the power to the flat screen TV or places it into the standby mode.

2 **INPUT:** Selects an input source of the flat screen TV. ("INPUT 1", "INPUT 2", "INPUT 3", "INPUT 4", "INPUT 5")

3 **◨:** Switches the screen mode among 2-screen, picture-in-picture, and single-screen.

4 **PC:** Selects the PC terminal as an input source.

5 **⇔:** Switches between the two screens when in the 2-screen or picture-in-picture mode.

6 **0 to 9:** TV/External input mode: Selects a channel.
Teletext mode: Selects a page.
Turns the power on when the STANDBY indicator lights red.

7 **P+/P–:** TV/External input mode: Selects a channel.

▶/◀: Teletext mode: Selects a page.

8 **🔇:** Mutes the sound.

9 **✕ EXIT:** Returns to the normal screen in one step.

10 **↑/↓/←/→:** Selects a desired item on the setting screen.

ENTER: Executes a command.

11 **⌂ HOME MENU:** Displays the HOME MENU screen.

12 **Colour (RED/GREEN/YELLOW/BLUE):**
Teletext mode: Selects a page.

13 **…:** Jumps to Teletext subtitle page.
Turns subtitle on and off in DTV input mode depending on the broadcast.

14 **?:** Displays hidden characters.

15 **I–II:** Sets the sound multiplex mode.

16 **▣:** TV/External input mode: Freezes a frame from a moving image. Press again to cancel the function.

≣: Teletext mode: Stops updating Teletext pages. Press again to release the hold mode.

17 **TV, STB, DVD/DVR, VCR:** These indicators show the current selection and status when you control other connected equipment, using the supplied remote control unit.

18 **HDMI CONTROL:** Displays the HDMI Control menu.

19 **i+ ◷ INFO:** Displays the channel information.
Displays the banner information in DTV input mode.

20 **TV/DTV:** Switches between the TV and DTV input modes.

21 **⧉:** Moves the location of the small screen when in the picture-in-picture mode.

22 **◿ +/◿ –:** Sets the volume.

23 **EPG:** Displays the Electronic Programme Guide in DTV input mode.

24 **↩ RETURN:** Restores the previous menu screen.

25 **≣:** Selects the Teletext mode (all TV image, all TEXT image, TV/TEXT image).

26 **≣i:** Displays an Index page for the CEEFAX/FLOF format.
Displays a TOP Over View page for the TOP format.

27 **⇔:** Selects the screen size.

28 **SELECT:** Switches the selection among TV, STB, DVD/DVR, and VCR, so that you can control other connected equipment, using the supplied remote control unit.

Note

- When using the remote control unit, point it at the flat screen TV.

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

Items to be checked after repair (PDP)

To ensure the quality of the product after repair, check the recommended items shown below:

No.	Procedures	Item to be checked
1	Check if all the symptoms pointed out by the customer have been addressed.	The symptoms in question must not be reproduced.
2	Connect the peripheral equipment.	Connect all external peripheral equipment as originally connected and check if the connections are correct.
3	Check the video and audio.	Tune in to the stations that the customer would normally receive and check if video and audio are normal.
4	Check the buttons and controls.	Use the buttons and controls on the remote control unit and main unit and check if they operate properly.
5	Check the cabinet.	Check for any scratches or dirt that have been made or attached on the cabinet after receiving the product for repair.

See the table below for the items to be checked regarding video and audio:

Item to be checked regarding video	Item to be checked regarding audio
Block noise	Distortion
Horizontal noise	Noise
Dot noise	Volume too low
Disturbed image (video jumpiness)	Volume too high
Too dark	Volume fluctuating
Too bright	Sound interrupted
Mottled color	

Cleaning

Name	Part No.	Remarks
Cleaning paper	GED-008	Used to fan cleaning. Refer to “9.4 CHASSIS SECTION (1/2)”.

3.2 QUICK REFERENCE

Quick Reference upon Service Visit ①
Notes, PD/SD diagnosis, and methods for various settings

Notes when visiting for service

1. Notes when disassembling/reassembling

① Rear case

When reassembling the rear case, the screws must be tightened in a specific order. Be careful not to tighten them in the wrong order forcibly. For details, see "Rear Case" in "7. DISASSEMBLY".

② Attaching screws for the HDMI connector

When attaching the HDMI connector after replacing the Main Assy, secure the HDMI connector manually with a screwdriver, but not with an electric screwdriver. If you tighten the screws too tightly with an electric screwdriver, the screw heads may be damaged, in which case the screws cannot be untightened/tightened any more.

2. On parts replacement

① How to discharge before replacing the Assys

A charge of significant voltage remains in the Plasma Panel even after the power is turned off. Safely discharge the panel before replacement of parts, in either manner indicated below:

A: Let the panel sit at least for 3 minutes after the power is turned off.

B: Turn the Large Signal System off before the power is turned off then, after 1 minute, turn the power off.

For details, see "5.6 [1] PANEL DRIVE-POWER ON/OFF FUNCTION".

② On the settings after replacement of the Assys

Some boards need settings made after replacement of the Assys. For details, see "8. EACH SETTING AND ADJUSTMENT".

3. On various settings

① Setting in Factory mode

After a Mask indication into the panel is performed, be sure to set the Mask setting to "OFF" then exit Factory mode.

PD/SD

Item	No. of LEDs flashing Red	 Blue
SQ_LSI		Blue 1
Module device communication		Blue 2
DIGITAL-RST2		Blue 3
Panel temperature		Blue 4
Audio		Blue 5
Module UCOM communication		Blue 6
Main 3-wire serial communication		Blue 7
Main IIC communication		Blue 8
Main UCOM communication		Blue 9
FAN		Blue 10
Unit high temperature		Blue 11
D-TUNER communication		Blue 12
MTB-RST2/RST4		Blue 13
Main EEPROM		Blue 15
POWER	Red 2	
SCAN	Red 3	
SCN-5V	Red 4	
Y-DCDC	Red 6	
Y-SUS	Red 7	
ADRS	Red 8	
X-DCDC	Red 10	
X-SUS	Red 11	
DIG-DCDC	Red 12	
UNKNOWN	Red 15	

Subcategory confirmation procedure

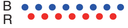
If the DISPLAY key is pressed during shutdown, the orange LED flashes. For indication patterns other than described below, see 5.4 [2].

SD	SD Subcategory	
2	1	EEPROM
	2	BACKUP
	3	DAC
4	1	PANEL high temperature
	2	PANEL low temperature
8	1	Tuner 1
	2	MSP/MAP
	3	AV Switch
	4	RGB Switch
	5	Main VDEC
	6	VDEC-SDRAM
	7	AD/PLL
	8	HDMI
	13	COFDEM (PDP-LX5090 only)
13	1	RST2
	2	RST4

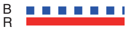
LED Display Information

For indication patterns other than described below, see 5.1 [1].

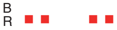
① Rewriting software



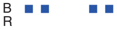
② No backup



③ PD (2-15)



④ SD (1-15)



How to locate several items on the Factory menu

{ } : Item on the Factory menu
[ ] : Key on the remote control unit
" " : Screen indication

1. Confirmation of accumulated power-on time and power-on count

Select {INFORMATION} then {HOUR METER}.
(After entering Factory mode, press [⬇] four times.)

2. Confirmation of the Power-down and Shutdown histories

① Panel system

PD: Select {PANEL FACTORY} then {POWER DOWN}.
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [⬇] two times.)

SD: Select {PANEL FACTORY} then {SHUT DOWN}.
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [⬇] three times.)

② MTB section

Select {INFORMATION} then {MAIN NG}.
(After entering Factory mode, press [⬇] two times.)

3. How to display the Mask indication

① Mask indication in the panel side

1. Select {PANEL FACTORY} then {RASTER MASK SETUP}.
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [⬇] 8 times.)
2. Press [ENTER/SET], then select a Mask indication, using [⬆] or [⬇].

Adjustments and Settings after replacement of the Assys (Procedures in Factory mode)

1. Digital Video Assy: Transfer of backup data

① Select {PANEL FACTORY}, {ETC}, then {BACKUP DATA}. (After entering Factory mode, press [MUTING] once, press [ENTER/SET], press [⬇] seven times, then press [ENTER/SET].)
② Select {TRANSFER}, using [➡], then hold [ENTER/SET] pressed for at least 5 seconds.
③ After transfer of backup data is completed, {ETC} is automatically selected, and the LED on the front panel returns to normal lighting.

2. MAIN Assy: Execution of FINAL SETUP.

① Select {INITIALIZE} then {FINAL SETUP}, then press [ENTER/SET]. (After entering Factory mode, press [MUTING] three times, then press [⬇] four times.)
② Select "YES", using [➡]. Then hold [ENTER/SET] pressed for at least 5 seconds.
③ After "FINAL SETUP IS COMPLETE" is displayed on the screen, turn the POWER switch of the main unit off.

3. POWER SUPPLY Unit: Clearance of the accumulated power-on count and maximum temperature value

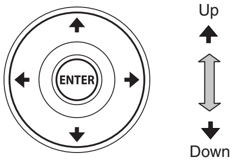
① Select {PANEL FACTORY}, {ETC}, then {P COUNT INFO}. (After entering Factory mode, press [MUTING] once, press [ENTER/SET], press [⬇] seven times, press [ENTER/SET], then press [⬇] six times.)
② Press [➡] to select "CLEAR". Hold [ENTER/SET] pressed for at least 5 seconds. After clearance is completed, "ETC" is automatically selected. Clear the maximum temperature value (MAX TEMP) in the same manner.

4. Other Assys: Clearance of the maximum temperature value

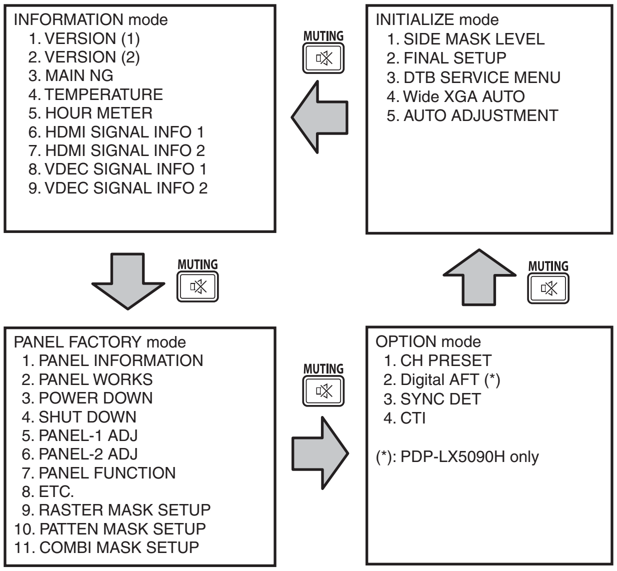
① Select {PANEL FACTORY}, {ETC}, then {MAX TEMP}. (After entering Factory mode, press [MUTING] once, press [ENTER], press [⬇] seven times, press [ENTER/SET], then press [⬇] seven times.)
② Press [➡] to select "CLEAR". Hold [ENTER/SET] pressed for at least 5 seconds. After clearance is completed, "ETC" is automatically selected.

Quick Reference upon Service Visit ②
Mode transition and structure of layers in Service Factory mode

Mode transition in Service Factory mode



- To shift to another mode, press [MUTING].
- To shift to another item in a specific mode, press [↑] or [↓].
- To shift to the next nested layer below for an item with a "(+)" indication, press [ENTER/SET]. To return to the next nested layer above, also press [ENTER/SET].



INFORMATION mode
1. VERSION (1)
2. VERSION (2)
3. MAIN NG
4. TEMPERATURE
5. HOUR METER
6. HDMI SIGNAL INFO 1
7. HDMI SIGNAL INFO 2
8. VDEC SIGNAL INFO 1
9. VDEC SIGNAL INFO 2

INITIALIZE mode
1. SIDE MASK LEVEL
2. FINAL SETUP
3. DTB SERVICE MENU
4. Wide XGA AUTO
5. AUTO ADJUSTMENT

PANEL FACTORY mode
1. PANEL INFORMATION
2. PANEL WORKS
3. POWER DOWN
4. SHUT DOWN
5. PANEL-1 ADJ
6. PANEL-2 ADJ
7. PANEL FUNCTION
8. ETC.
9. RASTER MASK SETUP
10. PATTEN MASK SETUP
11. COMBI MASK SETUP

OPTION mode
1. CH PRESET
2. Digital AFT (*)
3. SYNC DET
4. CTI

(*): PDP-LX5090H only

Structure of Layers in Service Factory Mode

INFORMATION mode	
1. VERSION (1)	The software versions for each microcomputer
2. VERSION (2)	The Flash memory versions for each device
3. MAIN NG	The shutdown message ID/event times (Going Clear mode by [ENTER/SET] key)
└ 3-1. CLEAR	Select Yes by [→] key → pushing and hold [ENTER/SET] key
4. TEMPERATURE	The temperature/FAN rotating status/Room Light Sensor
5. HOUR METER	The HOUR METER/P-COUNT information
6. HDMI SIGNAL INFO 1	The information of HDMI information files
7. HDMI SIGNAL INFO 2	The information of HDMI information files
8. VDEC SIGNAL INFO 1	The signal information of VDEC
9. VDEC SIGNAL INFO 2	The signal information of VDEC
PANEL FACTORY mode	Refer to [PANEL FACTORY MODE]
OPTION mode	
1. CH PRESET	For production line use
2. Digital AFT	For production line use (PDP-LX5090H only)
3. SYNC DET	For technical analysis
4. CTI	For technical analysis
INITIALIZE mode	
1. SIDE MASK LEVEL	For factory use
└ 1-1. SIDE MASK LEVEL	
2. FINAL SETUP	Set to Factory default settings (it should perform after replacing a MAIN Assy)
└ 2-1. DATA RESET	
3. DTB SERVICE MODE	Information for the Digital Tuner Service Menu is displayed
└ 3-1. MODE SHIFT	
4. Wide XGA AUTO	For technical analysis
5. AUTO ADJUSTMENT	

Structure of Layers in Panel Factory Mode 1

1. PANEL INFORMATION	Version indication of the panel
2. PANEL WORKS	Indications of the accumulated power-on time and power-on count of the panel
3. POWER DOWN	Indication of the Power-down history
4. SHUT DOWN	Indication of the Shutdown history
5. PANEL-1 ADJ (+)	
1. VOL SUS	Settings required after replacement of the panel
2. VOL OFFSET	
• • • • •	
10. RESET1ST_KSB	Items for factory use
• • • • •	
25. SUS FREQ	For AM noise prevention (Depending on the mode, brightness of the screen changes.) For confirmation of the result of the setting change, the unit must be turned off then back on again.
6. PANEL-2 ADJ (+)	
1. R-HIGH	For the WB adjustment of the panel and ABL adjustment. A setting table is available for each signal frequency.
2. G-HIGH	
• • • • •	
6. B-LOW	
7. ABL	
7. PANEL FUNCTION (+)	
1. R-LEVEL	Items for factory use
• • • • •	

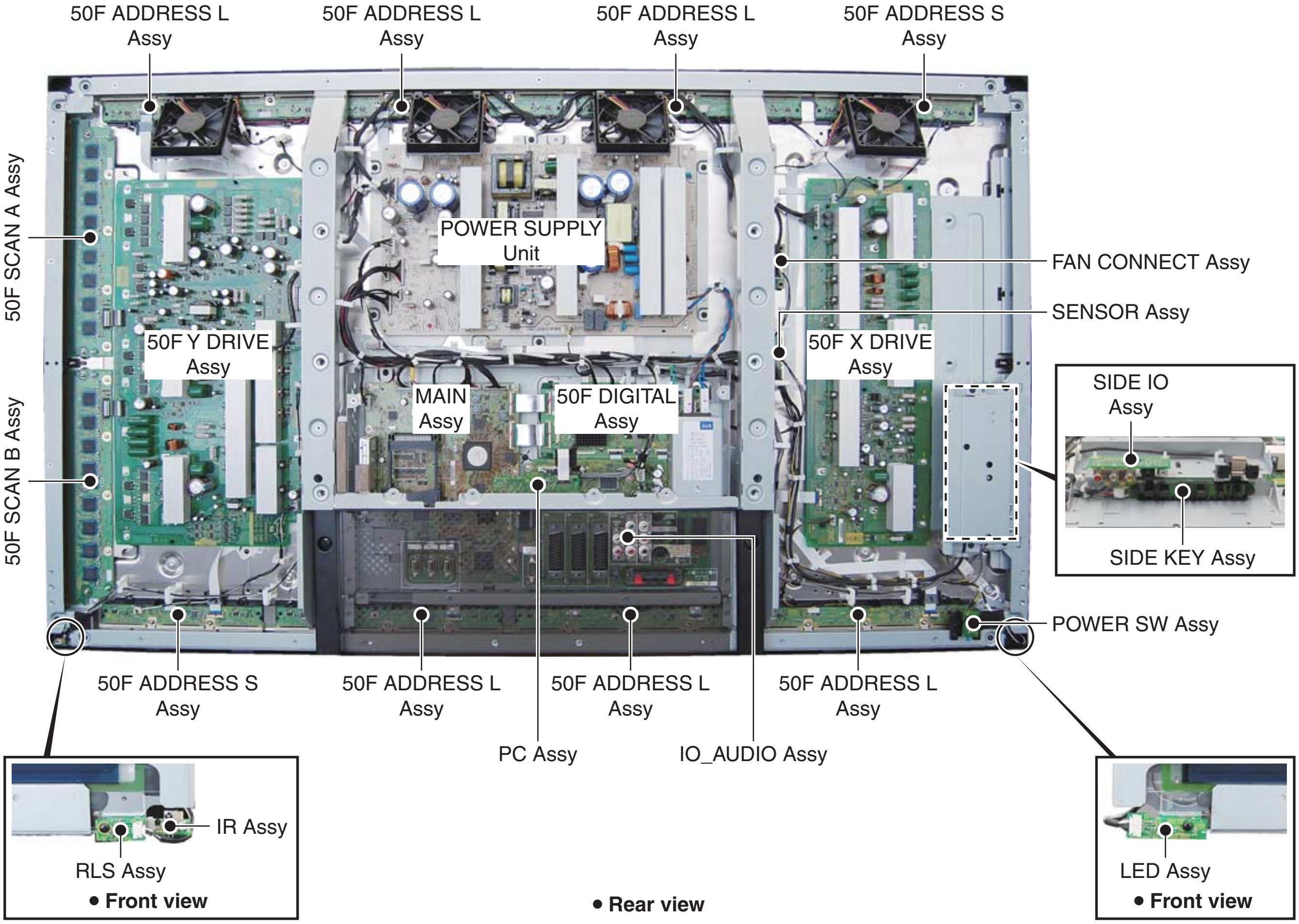
To "Structure of Layers in Panel Factory Mode 2"

Structure of Layers in Panel Factory Mode 2

8. ETC (+)	
1. BACKUP DATA	For transferring backup data (after replacement of the DIGITAL Assy)
2. DIGITAL EEPROM	Change the adjustment status of the DIGITAL Assy.
3. PD INFO.	For clearance of data for the corresponding items. The clearing method is the same: Select "CLEAR", then hold [ENTER/SET] pressed for at least 5 seconds.
4. SD INFO.	
5. HR-MTR INFO.	
6. PM/B1-B5	
7. P COUNT INFO.	
8. MAX TEMP.	
9. MIRROR	Switch the Mirror display mode.
10. CLS	Switch the function when checking the color sensor level.
9. RASTER MASK SETUP (+)	
1. MASK OFF	For use while the Raster Mask is displayed. Use [↑] or [↓] to select the type of mask. Use [→] or [←] to select the sequence.
2. RST MASK 01	
• • • • •	
10. PATTERN MASK SETUP (+)	
1. MASK OFF	For use while the Pattern Mask is displayed. Use [↑] or [↓] to select the type of mask. Use [→] or [←] to select the sequence.
2. PTN MASK 01	
• • • • •	
11. COMBI MASK SETUP (+)	
1. MASK OFF	For use while the Combination Mask is displayed. Use [↑] or [↓] to select the type of mask. Use [→] or [←] to select the sequence.
2. CMB MASK 01	
• • • • •	

3.3 PCB LOCATIONS

Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype. Upon servicing, be sure to restore the original wiring of the unit after repair work.


50F ADDRESS L Assy
50F ADDRESS L Assy
50F ADDRESS L Assy
50F ADDRESS S Assy
50F SCAN A Assy
50F SCAN B Assy
POWER SUPPLY Unit
FAN CONNECT Assy
SENSOR Assy
50F Y DRIVE Assy
50F X DRIVE Assy
MAIN Assy
50F DIGITAL Assy
SIDE IO Assy
SIDE KEY Assy
POWER SW Assy
50F ADDRESS S Assy
50F ADDRESS L Assy
50F ADDRESS L Assy
50F ADDRESS L Assy
PC Assy
IO_AUDIO Assy
IR Assy
RLS Assy
● Front view
● Rear view
LED Assy
● Front view

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

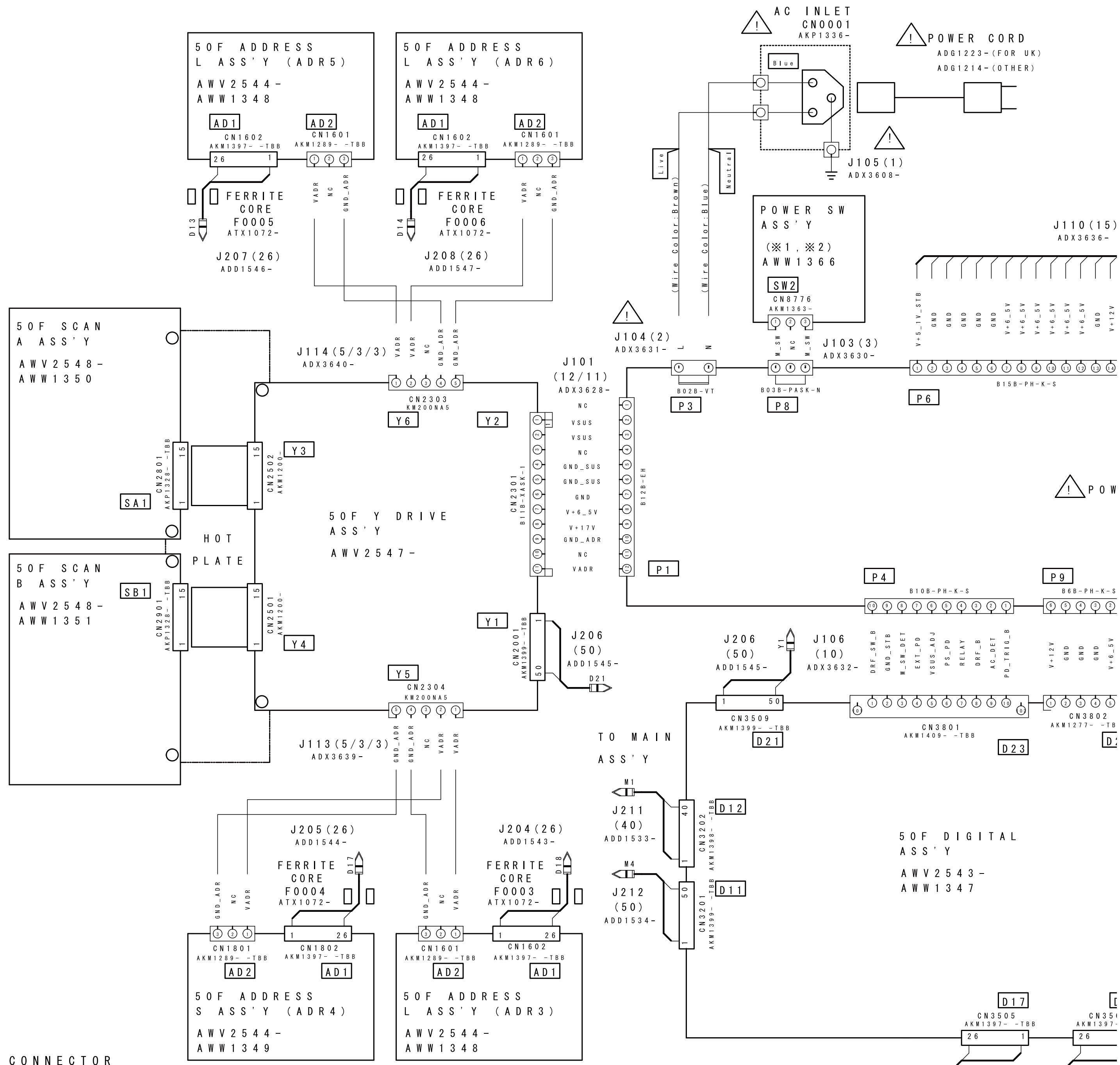
LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP		50F ADDRESS L ASSY	AWW1348
NSP		50F ADDRESS S ASSY	AWW1349
NSP		50F SCAN A ASSY	AWW1350
		└ IC2801 - IC2808	AN16184A
NSP		50F SCAN B ASSY	AWW1351
		└ IC2901 - IC2908	AN16184A
		SENSOR ASSY	AWW1340
		50F DIGITAL Assy	AWW1347
		50F X DRIVE ASSY	AWV2546
		50F Y DRIVE ASSY	AWV2547

Mark	No.	Description	Part No.
⚠		MAIN ASSY	AWV2555
		IO_AUDIO ASSY	AWW1354
		SIDE IO ASSY	AWW1358
		PC ASSY	AWW1359
		SIDE KEY ASSY	AWW1361
		LED ASSY	AWW1362
		IR ASSY	AWW1363
		FAN CONNECT ASSY	AWW1364
		RLS ASSY	AWW1365
		POWER SW ASSY	AWW1366
⚠		POWER SUPPLY UNIT	AXY1200
		PDP SERVICE ASSY 509FE	AWU1342

4. BLOCK DIAGRAM

4.1 OVERALL WIRING DIAGRAM (1/2)


AC INLET
CN0001
AKP1336-
Blue
POWER CORD
ADG1223-(FOR UK)
ADG1214-(OTHER)
J105(1)
ADX3608-
Live
Neutral
(Wire Color:Brown)
(Wire Color:Blue)
50F ADDRESS L ASS'Y (ADR5)
AWV2544-
AWW1348
AD1
AD2
CN1602
AKM1397- -TBB
CN1601
AKM1289- -TBB
VADR
NC
GND_ADR
FERRITE CORE
F0005
ATX1072-
D13
J207(26)
ADD1546-
50F ADDRESS L ASS'Y (ADR6)
AWV2544-
AWW1348
FERRITE CORE
F0006
ATX1072-
D14
J208(26)
ADD1547-
POWER SW ASS'Y
(※1, ※2)
AWW1366
SW2
CN8776
AKM1363-
M_SW
NC
M_SW
J110(15)
ADX3636-
V+5_1V_STB
GND
V+6_5V
V+12V
J104(2)
ADX3631-
L
N
B02B-VT
P3
J103(3)
ADX3630-
B03B-PASK-N
P8
B15B-PH-K-S
P6
50F SCAN A ASS'Y
AWV2548-
AWW1350
SA1
CN2801
AKP1328- -TBB
15
1
J114(5/3/3)
ADX3640-
CN2303
KM200NA5
Y6
Y2
Y3
CN2502
AKM1200-
J101
(12/11)
ADX3628-
NC
VSUS
VSUS
NC
GND_SUS
GND_SUS
GND
V+6_5V
V+17V
GND_ADR
NC
VADR
CN2301
B11B-XASK-1
B12B-EH
P1
POW
HOT PLATE
50F Y DRIVE ASS'Y
AWV2547-
50F SCAN B ASS'Y
AWV2548-
AWW1351
SB1
CN2901
AKP1328- -TBB
CN2501
AKM1200-
Y4
Y1
CN2001
AKM1399- -TBB
50
J206
(50)
ADD1545-
D21
Y5
CN2304
KM200NA5
J113(5/3/3)
ADX3639-
P4
B10B-PH-K-S
P9
B6B-PH-K-S
J206
(50)
ADD1545-
J106
(10)
ADX3632-
DRF_SW_B
GND_STB
M_SW_DET
EXT_PD
VSUS_ADJ
PS_PD
RELAY
DRF_B
AC_DET
PD_TRIG_B
V+12V
GND
V+6_5V
CN3509
AKM1399- -TBB
D21
CN3801
AKM1409- -TBB
D23
CN3802
AKM1277- -TB
TO MAIN ASS'Y
M1
J211
(40)
ADD1533-
CN3202
AKM1398- -TBB
D12
M4
J212
(50)
ADD1534-
CN3201
AKM1399- -TBB
D11
50F DIGITAL ASS'Y
AWV2543-
AWW1347
J205(26)
ADD1544-
FERRITE CORE
F0004
ATX1072-
D17
J204(26)
ADD1543-
FERRITE CORE
F0003
ATX1072-
D18
CN1801
AKM1289- -TBB
CN1802
AKM1397- -TBB
AD2
AD1
50F ADDRESS S ASS'Y (ADR4)
AWV2544-
AWW1349
CN1601
AKM1289- -TBB
CN1602
AKM1397- -TBB
50F ADDRESS L ASS'Y (ADR3)
AWV2544-
AWW1348
D17
CN3505
AKM1397- -TBB
J205
(26)
ADD1544-
AD1(ADR4)
J204
(26)
ADD154
AD1(ADR3)

※1	PDP-LX5090	AWV2551-

CONNECTOR PIN ASSIGN

CN3501 D13 → CN1602 AD1
CN3502 D14 → CN1602 AD1
CN3503 D15 → CN1602 AD1
CN3504 D16 → CN1802 AD1
CN3505 D17 → CN1802 AD1
CN3506 D18 → CN1602 AD1
CN3507 D19 → CN1602 AD1
CN3508 D20 → CN1602 AD1

```
 1→26. V+10V     14→13. CLKN
 2→25. V+10V     15→12. CLKP
 3→24. GND       16→11. GND
 4→23. GND       17→10. DN
 5→22. AN        18→ 9. DP
 6→21. AP        19→ 8. GND
 7→20. GND       20→ 7. GND
 8→19. BN        21→ 6. V+3_3V
 9→18. BP        22→ 5. V+3_3V
10→17. GND       23→ 4. V+3_3V
11→16. CN        24→ 3. GND
12→15. CP        25→ 2. LS1
13→14. GND       26→ 1. ADR_PD
```

CN2501 Y4
↓
CN2901 SB1

```
 1. VH
 2. VH
 3. NC
 4. NC
 5. GNDH_VH
 6. GNDH_VH
 7. SI
 8. GNDH_DIG
 9. CLK_L
10. LE
11. OC1
12. OC2
13. CLR
14. GNDH_RL
15. IC5V
```

CN2502 Y3
↓
CN2801 SA1

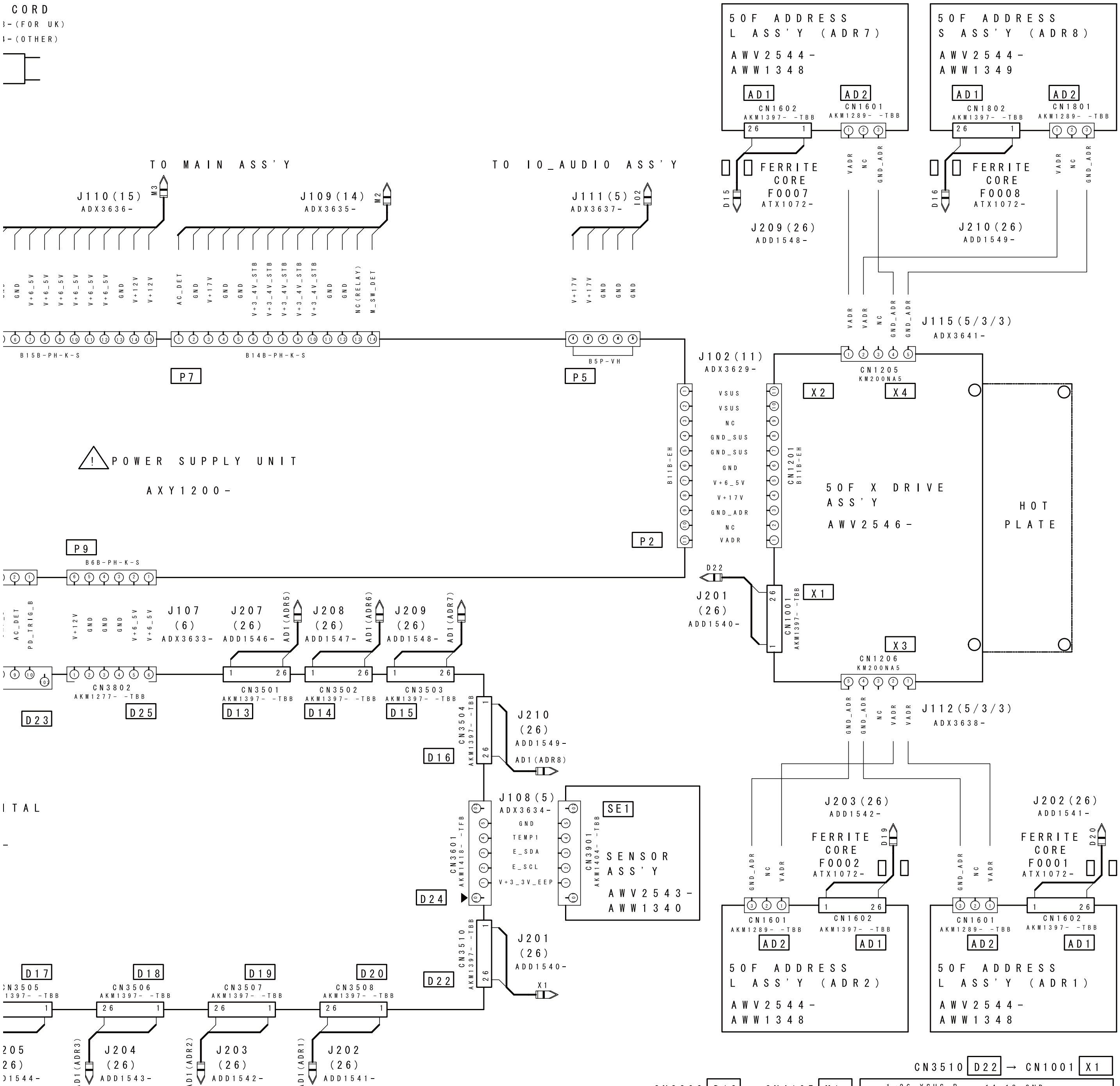
```
 1. VH
 2. VH
 3. NC
 4. NC
 5. GNDH_VH
 6. GNDH_VH
 7. CLK_H
 8. GNDH_DIG
 9. LE
10. OC1
11. OC2
12. CLR
13. SI
14. GNDH_RH
15. IC5V
```

CN3509 D21 → CN2001 Y1

```
 1→50. YCN_PD         18→33. SUS_MUTE      35→16. YRSV4
 2→49. VYPRST_ADJ     19→32. YSNOFS        36→15. SI
 3→48. SCAN_PD        20→31. GND           37→14. CLK_H
 4→47. GND            21→30. YRST-D        38→13. GND
 5→46. YDD_PD         22→29. YSUS_LMSK     39→12. LE
 6→45. VOFS_ADJ       23→28. YSUS_HMSK     40→11. OC1
 7→44. YSUS_PD        24→27. GND           41→10. OC2
 8→43. GND            25→26. YSUS_D        42→ 9. CLR
 9→42. YRSV1          26→25. YPR-U         43→ 8. GND
10→41. YRSV2          27→24. YSUS_G        44→ 7. VKNOFS4_ADJ
11→40. GND            28→23. GND           45→ 6. VKNOFS3_ADJ
12→39. YKNOFS4        29→22. YSUS_U        46→ 5. VKNOFS1_2_ADJ
13→38. YKNOFS3        30→21. YRSV3         47→ 4. GND
14→37. YKNOFS2        31→20. YSUS_B        48→ 3. SCN5V_PD
15→36. YKNOFS1        32→19. ESW           49→ 2. YDRV_PD(GND)
16→35. GND            33→18. GND           50→ 1. PSW2
17→34. YSOFT-G        34→17. CLK_L
```

CN3201 D11 → CN4101 M4

```
 1→50. V+3_4V_ACT2    18→33. R8_EVN    35→16. G
 2→49. NC             19→32. R7_EVN    36→15. G
 3→48. GND            20→31. R6_EVN    37→14. G
 4→47. MULTI_OE       21→30. R5_EVN    38→13. G
 5→46. RELAY2         22→29. R4_EVN    39→12. B
 6→45. REQ_MD         23→28. R3_EVN    40→11. B
 7→44. RXD_MD         24→27. R2_EVN    41→10. B
 8→43. TXD_MD         25→26. R1_EVN    42→ 9. B
 9→42. GND            26→25. R0_EVN    43→ 8. B
10→41. THEATER        27→24. GND       44→ 7. B
11→40. VD             28→23. G9_EVN    45→ 6. B
12→39. HD             29→22. G8_EVN    46→ 5. B
13→38. DE             30→21. G7_EVN    47→ 4. B
14→37. GND            31→20. G6_EVN    48→ 3. B
15→36. CLK            32→19. G5_EVN    49→ 2. G
16→35. GND            33→18. G4_EVN    50→ 1. M
17→34. R9_EVN         34→17. G3_EVN
```


CORD
-(FOR UK)
-(OTHER)
TO MAIN ASS'Y
TO IO_AUDIO ASS'Y
J110(15)
ADX3636-
M3
J109(14)
ADX3635-
M2
J111(5)
ADX3637-
IO2
GND
V+6_5V
V+6_5V
V+6_5V
V+6_5V
V+6_5V
GND
V+12V
V+12V
AC_DET
GND
V+17V
GND
GND
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
GND
GND
NC(RELAY)
M_SW_DET
V+17V
V+17V
GND
GND
GND
B15B-PH-K-S
B14B-PH-K-S
B5P-VH
P7
P5
POWER SUPPLY UNIT
AXY1200-
P9
B6B-PH-K-S
AC_DET
PD_TRIG_B
V+12V
GND
GND
GND
V+6_5V
V+6_5V
P2
50F ADDRESS L ASS'Y (ADR7)
AWV2544-
AWW1348
AD1
AD2
CN1602
AKM1397- -TBB
CN1601
AKM1289- -TBB
50F ADDRESS S ASS'Y (ADR8)
AWV2544-
AWW1349
CN1802
CN1801
FERRITE CORE
F0007
ATX1072-
FERRITE CORE
F0008
ATX1072-
D15
D16
J209(26)
ADD1548-
J210(26)
ADD1549-
VADR
NC
GND_ADR
J115(5/3/3)
ADX3641-
CN1205
KM200NA5
J102(11)
ADX3629-
B11B-EH
VSUS
VSUS
NC
GND_SUS
GND_SUS
GND
V+6_5V
V+17V
GND_ADR
NC
VADR
CN1201
B11B-EH
X2
X4
50F X DRIVE ASS'Y
AWV2546-
HOT PLATE
D22
J201
(26)
ADD1540-
CN1001
AKM1397- -TBB
X1
X3
CN1206
KM200NA5
J112(5/3/3)
ADX3638-
J107
(6)
ADX3633-
J207
(26)
ADD1546-
AD1(ADR5)
J208
(26)
ADD1547-
AD1(ADR6)
J209
(26)
ADD1548-
AD1(ADR7)
CN3802
AKM1277- -TBB
CN3501
AKM1397- -TBB
CN3502
AKM1397- -TBB
CN3503
AKM1397- -TBB
D23
D25
D13
D14
D15
CN3504
AKM1397- -TBB
J210
(26)
ADD1549-
AD1(ADR8)
D16
ITAL
J108(5)
ADX3634-
CN3601
AKM1418- -TFB
GND
TEMP1
E_SDA
E_SCL
V+3_3V_EEP
CN3901
AKM1404- -TBB
SE1
SENSOR ASS'Y
AWV2543-
AWW1340
D24
CN3510
AKM1397- -TBB
J201
(26)
ADD1540-
X1
D22
D17
D18
D19
D20
CN3505
AKM1397- -TBB
CN3506
AKM1397- -TBB
CN3507
AKM1397- -TBB
CN3508
AKM1397- -TBB
205
(26)
ADD1544-
AD1(ADR3)
J204
(26)
ADD1543-
AD1(ADR2)
J203
(26)
ADD1542-
AD1(ADR1)
J202
(26)
ADD1541-
J203(26)
ADD1542-
FERRITE CORE
F0002
ATX1072-
D19
J202(26)
ADD1541-
FERRITE CORE
F0001
ATX1072-
D20
CN1601
AKM1289- -TBB
CN1602
AKM1397- -TBB
50F ADDRESS L ASS'Y (ADR2)
AWV2544-
AWW1348
50F ADDRESS L ASS'Y (ADR1)
AWV2544-
AWW1348

CN3202 D12 → CN4105 M1

1→40.MODE_B
2→39.SQ_SEL
3→38.GND
4→37.GND
5→36.R9_ODD
6→35.R8_ODD
7→34.R7_ODD
8→33.R6_ODD
9→32.R5_ODD
10→31.R4_ODD
11→30.R3_ODD
12→29.R2_ODD
13→28.R1_ODD
14→27.R0_ODD
15→26.GND
16→25.G9_ODD
17→24.G8_ODD
18→23.G7_ODD
19→22.G6_ODD
20→21.G5_ODD
21→20.G4_ODD
22→19.G3_ODD
23→18.G2_ODD
24→17.G1_ODD
25→16.G0_ODD
26→15.GND
27→14.B9_ODD
28→13.B8_ODD
29→12.B7_ODD
30→11.B6_ODD
31→10.B5_ODD
32→ 9.B4_ODD
33→ 8.B3_ODD
34→ 7.B2_ODD
35→ 6.B1_ODD
36→ 5.B0_ODD
37→ 4.GND
38→ 3.GND
39→ 2.GND
40→ 1.MODE_C

CN3510 D22 → CN1001 X1

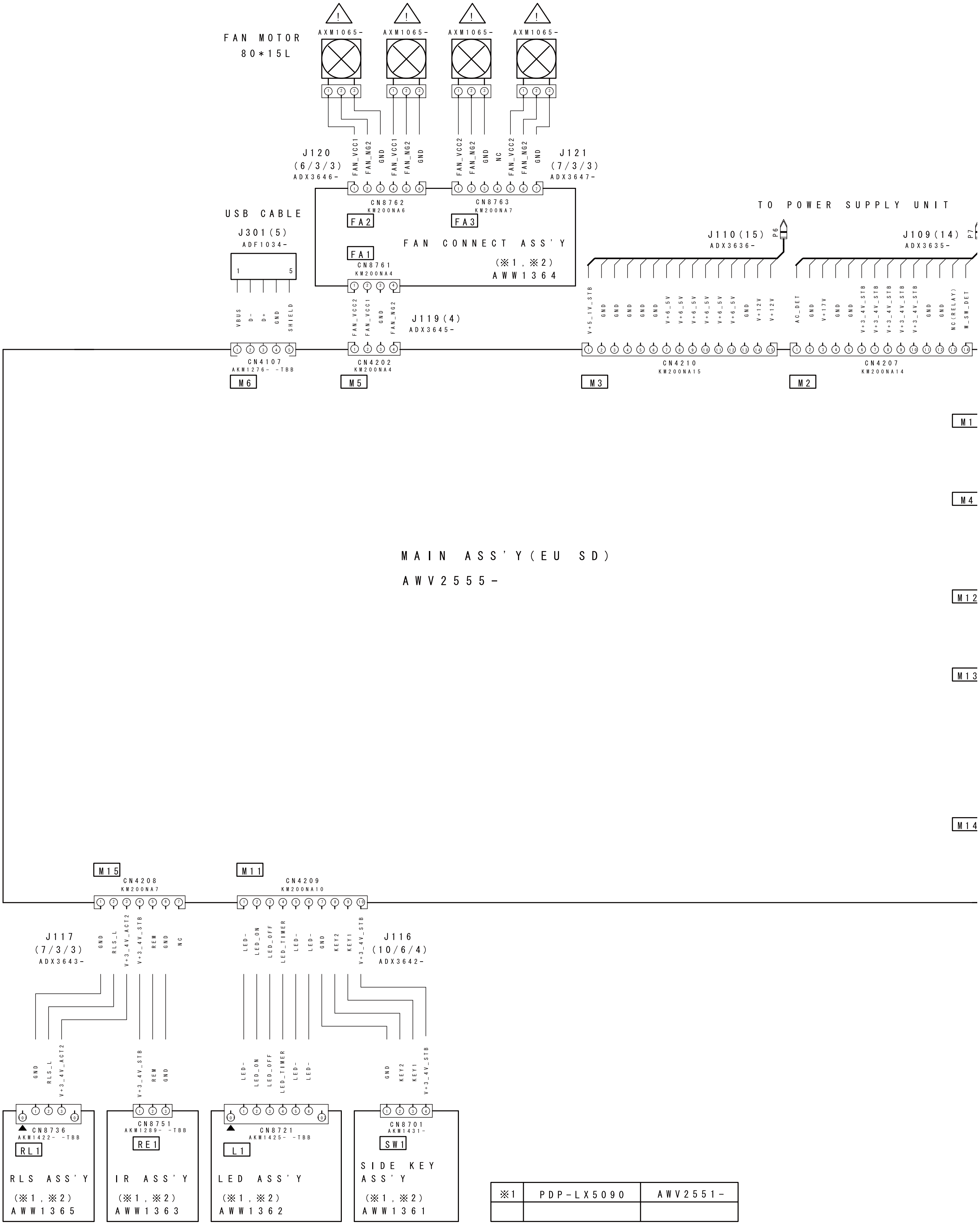
1→26.XSUS_B
2→25.GND
3→24.XSUS_U
4→23.GND
5→22.XSUS_D
6→21.GND
7→20.XSUS_G
8→19.GND
9→18.XPRST
10→17.GND
11→16.XKOFS1
12→15.GND
13→14.XKOFS2
14→13.GND
15→12.XSOFT_D
16→11.GND
17→10.SUS_MUTE
18→ 9.GND
19→ 8.XKOFS1_ADJ
20→ 7.XKOFS2_ADJ
21→ 6.GND
22→ 5.XDD_PD
23→ 4.PSW2
24→ 3.XRSV1
25→ 2.Psize
26→ 1.XSUS_PD

M4

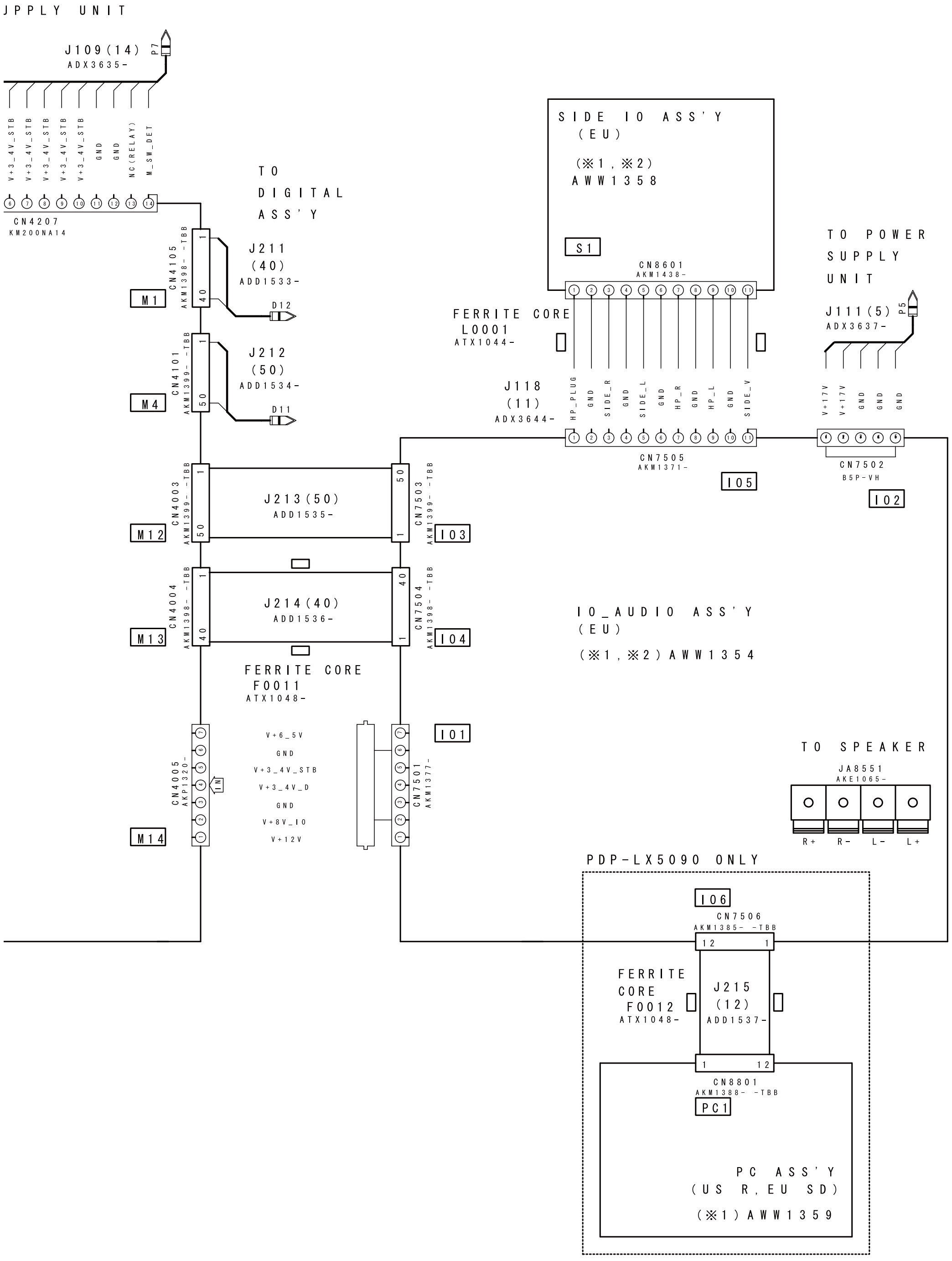
8→33.R8_EVN
9→32.R7_EVN
0→31.R6_EVN
1→30.R5_EVN
2→29.R4_EVN
3→28.R3_EVN
4→27.R2_EVN
5→26.R1_EVN
6→25.R0_EVN
7→24.GND
8→23.G9_EVN
9→22.G8_EVN
0→21.G7_EVN
1→20.G6_EVN
2→19.G5_EVN
3→18.G4_EVN
4→17.G3_EVN
35→16.G2_EVN
36→15.G1_EVN
37→14.G0_EVN
38→13.GND
39→12.B9_EVN
40→11.B8_EVN
41→10.B7_EVN
42→ 9.B6_EVN
43→ 8.B5_EVN
44→ 7.B4_EVN
45→ 6.B3_EVN
46→ 5.B2_EVN
47→ 4.B1_EVN
48→ 3.B0_EVN
49→ 2.GND
50→ 1.MODE_A

- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

4.2 OVERALL WIRING DIAGRAM (2/2)


FAN MOTOR
80*15L
AXM1065-
AXM1065-
AXM1065-
AXM1065-
J120
(6/3/3)
ADX3646-
FAN_VCC1
FAN_NG2
GND
FAN_VCC1
FAN_NG2
GND
FAN_VCC2
FAN_NG2
GND
NC
FAN_VCC2
FAN_NG2
GND
J121
(7/3/3)
ADX3647-
CN8762
KM200NA6
CN8763
KM200NA7
FA2
FA3
FA1
CN8761
KM200NA4
FAN CONNECT ASS'Y
(※1, ※2)
AWW1364
USB CABLE
J301(5)
ADF1034-
1
5
VBUS
D-
D+
GND
SHIELD
FAN_VCC2
FAN_VCC1
GND
FAN_NG2
J119(4)
ADX3645-
CN4107
AKM1276- -TBB
M6
CN4202
KM200NA4
M5
TO POWER SUPPLY UNIT
J110(15)
ADX3636-
P6
J109(14)
ADX3635-
P7
V+5_1V_STB
GND
GND
GND
GND
GND
V+6_5V
V+6_5V
V+6_5V
V+6_5V
V+6_5V
V+6_5V
GND
V+12V
V+12V
AC_DET
GND
V+17V
GND
GND
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
GND
GND
NC(RELAY)
M_SW_DET
CN4210
KM200NA15
M3
CN4207
KM200NA14
M2
M1
M4
MAIN ASS'Y(EU SD)
AWV2555-
M12
M13
M14
M15
CN4208
KM200NA7
M11
CN4209
KM200NA10
J117
(7/3/3)
ADX3643-
GND
RLS_L
V+3_4V_ACT2
V+3_4V_STB
REM
GND
NC
LED-
LED_ON
LED_OFF
LED_TIMER
LED-
LED-
GND
KEY2
KEY1
V+3_4V_STB
J116
(10/6/4)
ADX3642-
GND
RLS_L
V+3_4V_ACT2
V+3_4V_STB
REM
GND
LED-
LED_ON
LED_OFF
LED_TIMER
LED-
LED-
GND
KEY2
KEY1
V+3_4V_STB
CN8736
AKM1422- -TBB
RL1
RLS ASS'Y
(※1, ※2)
AWW1365
CN8751
AKM1289- -TBB
RE1
IR ASS'Y
(※1, ※2)
AWW1363
CN8721
AKM1425- -TBB
L1
LED ASS'Y
(※1, ※2)
AWW1362
CN8701
AKM1431-
SW1
SIDE KEY
ASS'Y
(※1, ※2)
AWW1361

※1	PDP-LX5090	AWV2551-


JPPLY UNIT
J109(14)
ADX3635-
P7
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
V+3_4V_STB
GND
GND
NC(RELAY)
M_SW_DET
6
7
8
9
10
11
12
13
14
CN4207
KM200NA14
TO DIGITAL ASS'Y
CN4105
AKM1398- -TBB
1
40
M1
J211
(40)
ADD1533-
D12
CN4101
AKM1399- -TBB
1
50
M4
J212
(50)
ADD1534-
D11
SIDE IO ASS'Y
(EU)
(※1, ※2)
AWW1358
S1
CN8601
AKM1438-
FERRITE CORE
L0001
ATX1044-
J118
(11)
ADX3644-
HP_PLUG
GND
SIDE_R
GND
SIDE_L
GND
HP_R
GND
HP_L
GND
SIDE_V
CN7505
AKM1371-
I05
TO POWER SUPPLY UNIT
J111(5)
ADX3637-
P5
V+17V
V+17V
GND
GND
GND
CN7502
B5P-VH
I02
CN4003
AKM1399- -TBB
M12
J213(50)
ADD1535-
CN7503
AKM1399- -TBB
I03
CN4004
AKM1398- -TBB
M13
J214(40)
ADD1536-
CN7504
AKM1398- -TBB
I04
IO_AUDIO ASS'Y
(EU)
(※1, ※2) AWW1354
FERRITE CORE
F0011
ATX1048-
CN4005
AKP1320-
IN
M14
V+6_5V
GND
V+3_4V_STB
V+3_4V_D
GND
V+8V_IO
V+12V
CN7501
AKM1377-
I01
TO SPEAKER
JA8551
AKE1065-
R+
R-
L-
L+
PDP-LX5090 ONLY
I06
CN7506
AKM1385- -TBB
12
1
FERRITE CORE
F0012
ATX1048-
J215
(12)
ADD1537-
CN8801
AKM1388- -TBB
PC1
PC ASS'Y
(US R, EU SD)
(※1) AWW1359

CONNECTOR PIN ASSIGN

CN4003 M12 → CN7503 I03

1→50. GND	26→25. GND
2→49. HP_PLUG	27→24. EMMA_DA_GY
3→48. WP_EDID	28→23. EMMA_DA_BCB
4→47. DSUB_DET	29→22. EMMA_DA_RCR
5→46. AC_HP_MUTE	30→21. GND
6→45. GND	31→20. EXT_HD
7→44. SDA_AV	32→19. EXT_VD
8→43. SCL_AV	33→18. INT_VD
9→42. GND	34→17. INT_HD
10→41. AC_A_MUTE	35→16. CLP_RGB1
11→40. RST_MSP	36→15. CLP_RGB2
12→39. OTW	37→14. GND
13→38. A_NG_B	38→13. SDA_AV5
14→37. GND	39→12. SCL_AV5
15→36. I2S_BCLK_DTV	40→11. GND
16→35. GND	41→10. SR_OUT
17→34. I2S_LRCLK_DTV	42→ 9. TXD_SR
18→33. I2S_SDATA_DTV	43→ 8. RXD_SR
19→32. GND	44→ 7. GND
20→31. GND	45→ 6. TXD_232C_1
21→30. GND	46→ 5. RXD_232C_1
22→29. SPDIF_HDMI	47→ 4. NC(232C_EN_B)
23→28. GND	48→ 3. 232C_DET
24→27. GND	49→ 2. RST4
25→26. SPDIF_DTV	50→ 1. GND(IO_DET)

CN4004 M13 → CN7504 I04

1→40. GND	21→20. GND
2→39. RCR_AD	22→19. SUB_C
3→38. GND	23→18. GND
4→37. BCB_AD	24→17. SUB_Y
5→36. GND	25→16. GND
6→35. GY_AD	26→15. A_TUNER_V
7→34. GND	27→14. GND
8→33. RCR_VDEC	28→13. DT_MON_CVBS
9→32. GND	29→12. GND
10→31. BCB_VDEC	30→11. AIR_SIF
11→30. GND	31→10. GND
12→29. GY_VDEC	32→ 9. AC_AM_MUTE
13→28. GND	33→ 8. TEMP2
14→27. FB_VDEC	34→ 7. AC_SC1_MUTE
15→26. GND	35→ 6. LIMK_IO2
16→25. VBI_Y	36→ 5. AC_SC2_MUTE
17→24. GND	37→ 4. LIMK_IO3
18→23. MAIN_C	38→ 3. AC_SC3_MUTE
19→22. GND	39→ 2. IR_OUT
20→21. MAIN_Y	40→ 1. GND

CN4106 M17 → CN8804 CI3

1→50. CARD_DET1	26→25. GND
2→49. GND	27→24. TSO_CLK
3→48. I2C_CI_SDA	28→23. GND
4→47. I2C_CI_SCL	29→22. TSI_DATA0
5→46. GND	30→21. TSI_DATA1
6→45. CI_IRQ_N	31→20. TSI_DATA2
7→44. CI_RW_N	32→19. TSI_DATA3
8→43. CI_RD_N	33→18. TSI_DATA4
9→42. CI_ACK_N	34→17. TSI_DATA5
10→41. CI_CS_N	35→16. TSI_DATA6
11→40. CI_RST	36→15. TSI_DATA7
12→39. GND	37→14. TSI_VALID
13→38. CI_MCLK	38→13. TSI_SYNC
14→37. GND	39→12. GND
15→36. GND	40→11. TSI_CLK
16→35. TSO_DATA0	41→10. GND
17→34. TSO_DATA1	42→ 9. FE_TS_SEL
18→33. TSO_DATA2	43→ 8. EMG_DDC
19→32. TSO_DATA3	44→ 7. DD_RST
20→31. TSO_DATA4	45→ 6. FE2_RST
21→30. TSO_DATA5	46→ 5. FE2_INT
22→29. TSO_DATA6	47→ 4. GND
23→28. TSO_DATA7	48→ 3. I2C2_SDA
24→27. TSO_VALID	49→ 2. I2S2_SCL
25→26. TSO_SYNC	50→ 1. GND

CN4102 M16 → CN8803 CI2

1→50. GND	26→25. CI_D[6]
2→49. SPDIF_DTV_CI	27→24. CI_D[7]
3→48. GND	28→23. GND
4→47. ADSP_RST	29→22. CI_A[0]
5→46. ADSP_INT	30→21. CI_A[1]
6→45. DIR_RST	31→20. CI_A[2]
7→44. DIR_INT_N	32→19. CI_A[3]
8→43. SPI_SS0B	33→18. CI_A[4]
9→42. SPI_SS1B	34→17. CI_A[5]
10→41. SPI_SCK	35→16. CI_A[6]
11→40. SPI_MOSI	36→15. CI_A[7]
12→39. SPI_MISO	37→14. GND
13→38. GND	38→13. CI_A[8]
14→37. CI_B_EN	39→12. CI_A[9]
15→36. CI_B_FAULT_B	40→11. CI_A[10]
16→35. CI_A_EN	41→10. CI_A[11]
17→34. CI_A_FAULT_B	42→ 9. CI_A[12]
18→33. GND	43→ 8. CI_A[13]
19→32. CI_D[0]	44→ 7. CI_A[14]
20→31. CI_D[1]	45→ 6. CI_A[15]
21→30. CI_D[2]	46→ 5. GND
22→29. CI_D[3]	47→ 4. CI_A_VS1
23→28. GND	48→ 3. CI_B_VS1
24→27. CI_D[4]	49→ 2. GND
25→26. CI_D[5]	50→ 1. CARD_DET2

CN7506 I06 → CN9602 CI4

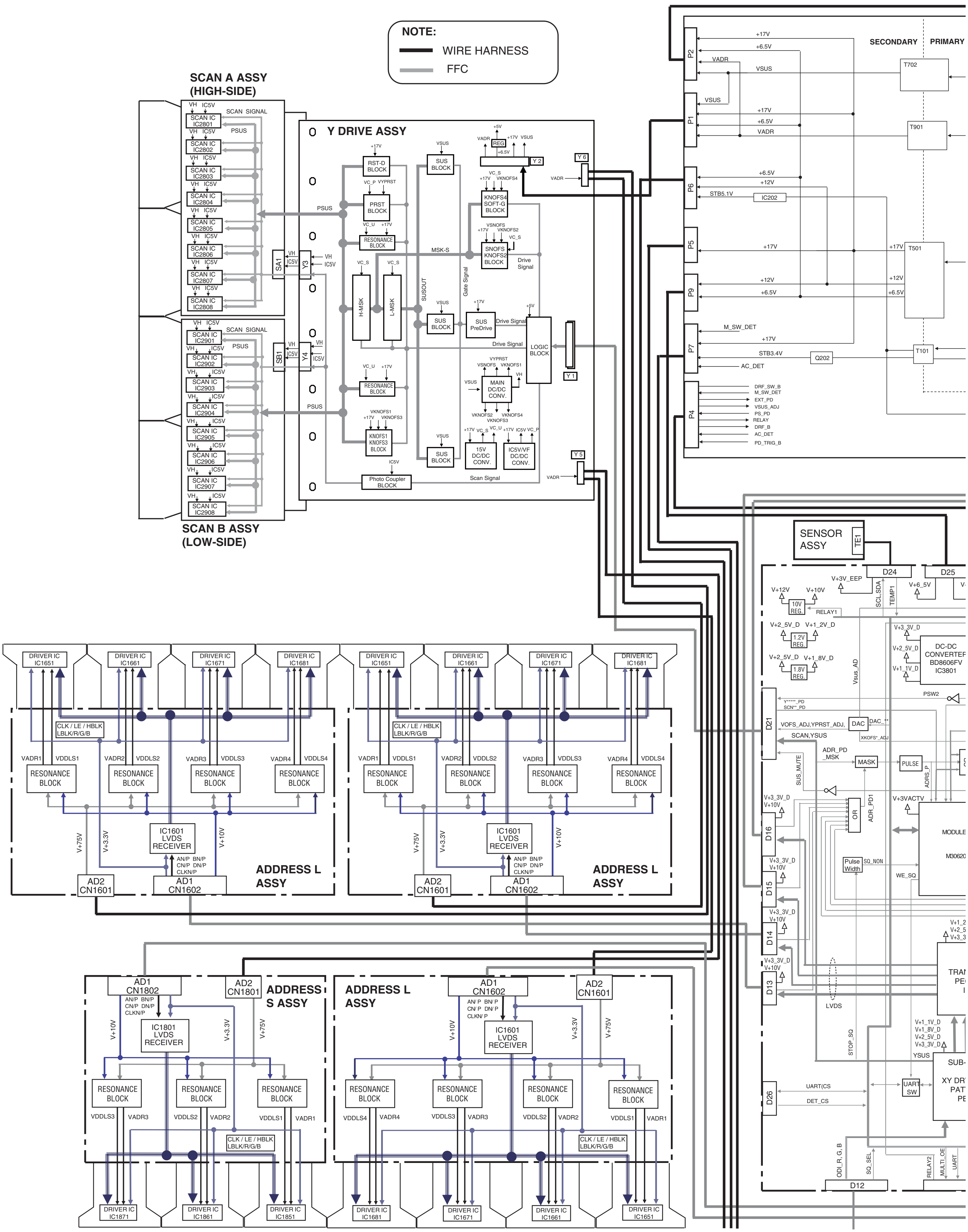
1→12. V+3_4V_STB	7→ 6. PC_B
2→11. PC_HD	8→ 5. GND
3→10. PC_VD	9→ 4. PC_G
4→ 9. GND	10→ 3. WP_EDID
5→ 8. PC_R	11→ 2. V+5V_IO
6→ 7. GND	12→ 1. SPDIF_ADSP

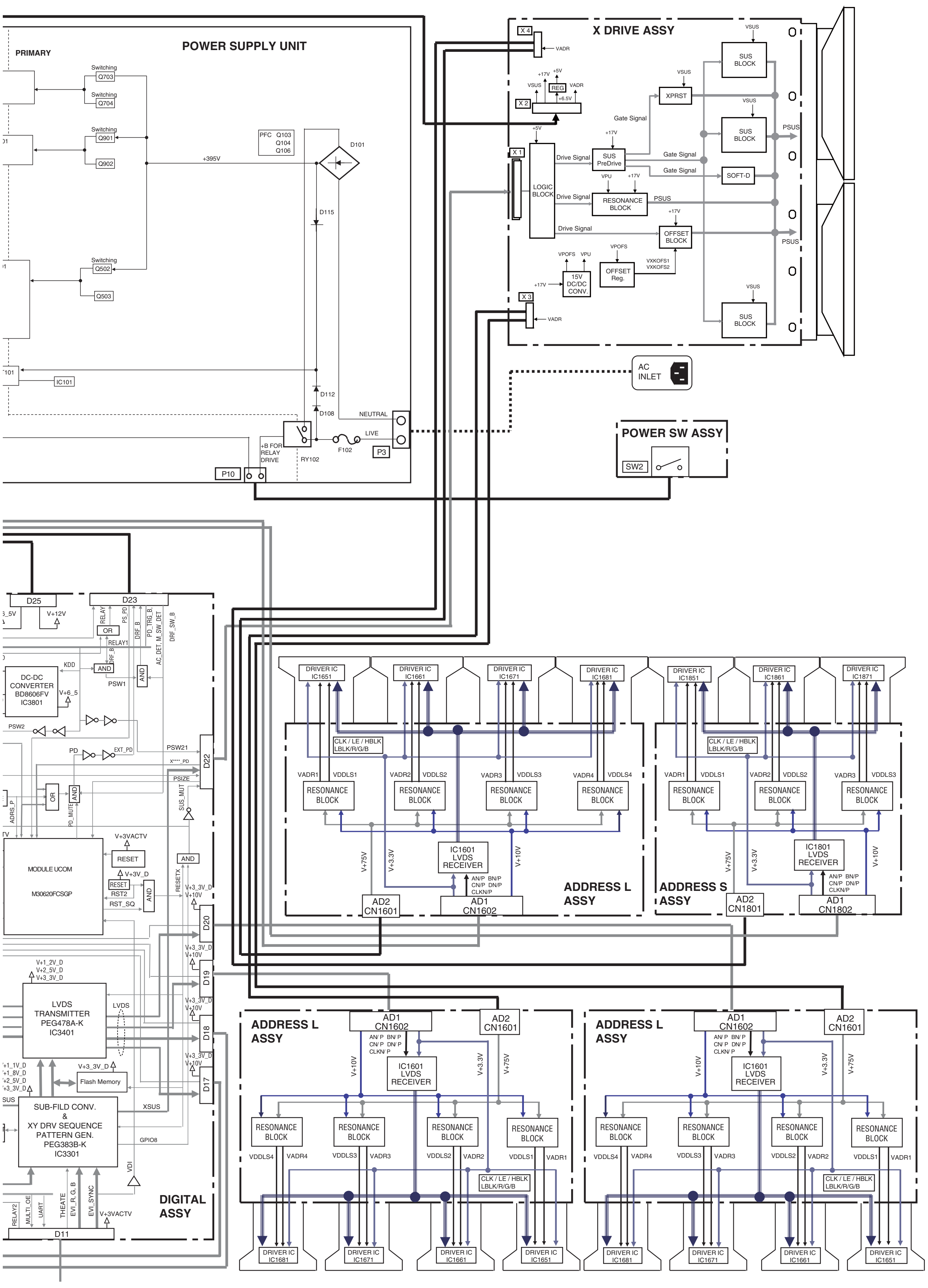
CN7506 I06 → CN8801 PC1

1→12. V+3_4V_STB	7→ 6. PC_B
2→11. PC_HD	8→ 5. GND
3→10. PC_VD	9→ 4. PC_G
4→ 9. GND	10→ 3. WP_EDID
5→ 8. PC_R	11→ 2. V+5V_IO
6→ 7. GND	12→ 1. GND

OVERALL DIAGRAM
PDP-LX5090

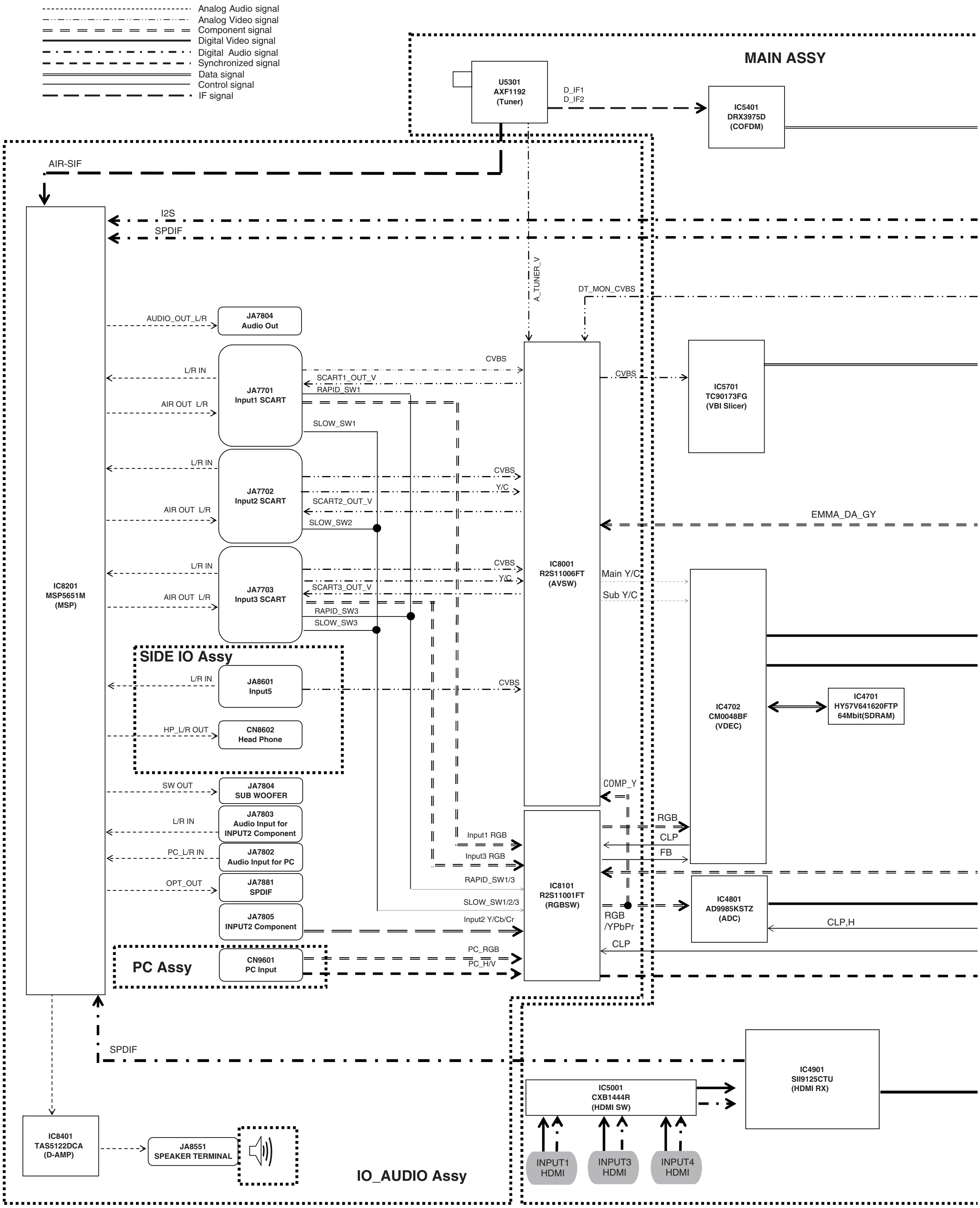
4.3 OVERALL BLOCK DIAGRAM (1/2)

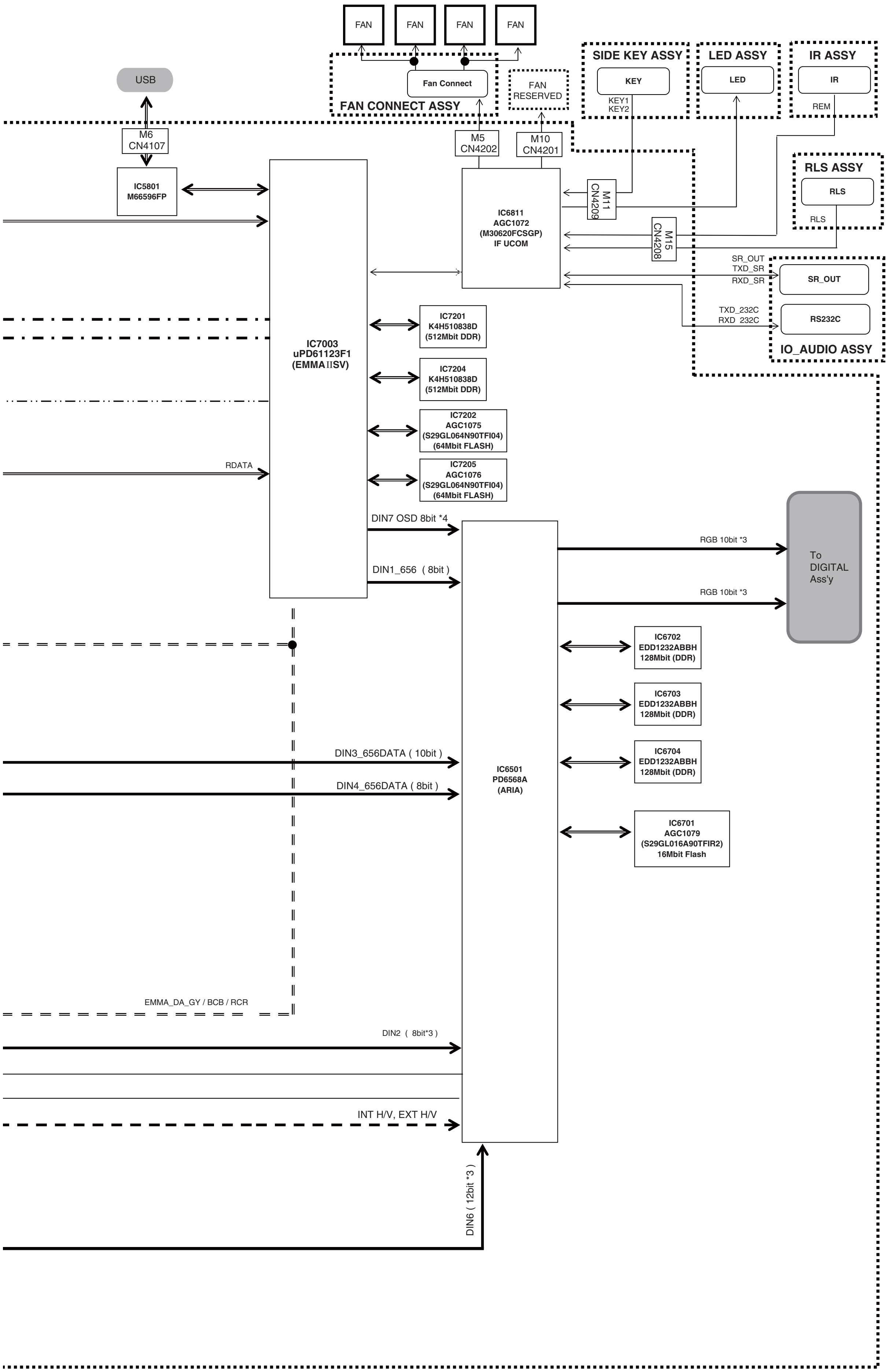

NOTE:
WIRE HARNESS
FFC
SCAN A ASSY (HIGH-SIDE)
SCAN B ASSY (LOW-SIDE)
SCAN IC IC2801
SCAN IC IC2802
SCAN IC IC2803
SCAN IC IC2804
SCAN IC IC2805
SCAN IC IC2806
SCAN IC IC2807
SCAN IC IC2808
SCAN IC IC2901
SCAN IC IC2902
SCAN IC IC2903
SCAN IC IC2904
SCAN IC IC2905
SCAN IC IC2906
SCAN IC IC2907
SCAN IC IC2908
VH
IC5V
SCAN SIGNAL
PSUS
SA1
SB1
Y3
Y4
Y DRIVE ASSY
RST-D BLOCK
PRST BLOCK
RESONANCE BLOCK
H-MSK
L-MSK
KNOFS1 KNOFS3 BLOCK
Photo Coupler BLOCK
SUS BLOCK
SUSOUT
MSK-S
Gate Signal
SUS PreDrive
KNOFS4 SOFT-G BLOCK
SNOFS KNOFS2 BLOCK
Drive Signal
REG
MAIN DC/DC CONV.
15V DC/DC CONV.
IC5V/VF DC/DC CONV.
LOGIC BLOCK
Scan Signal
VADR
VSUS
+17V
+6.5V
+5V
VC_S
VC_U
VC_P
VYPRST
VKNOFS1
VKNOFS2
VKNOFS3
VKNOFS4
VSNOFS
Y 1
Y 2
Y 5
Y 6
P2
P1
P6
P5
P9
P7
P4
SECONDARY
PRIMARY
T702
T901
T501
T101
IC202
Q202
+12V
STB5.1V
STB3.4V
M_SW_DET
AC_DET
DRF_SW_B
M_SW_DET
EXT_PD
VSUS_ADJ
PS_PD
RELAY
DRF_B
AC_DET
PD_TRIG_B
SENSOR ASSY
TE1
D24
D25
V+3V_EEP
V+12V
V+10V
V+6_5V
10V REG.
RELAY1
SCL,SDA
TEMP1
V+2_5V_D
V+1_2V_D
1.2V REG.
V+1_8V_D
1.8V REG.
V+3_3V_D
DC-DC CONVERTER BD8606FV IC3801
V+1_1V_D
Vsus_AD
PSW2
D21
VOFS_ADJ,YPRST_ADJ,
SCAN,YSUS
DAC
XKOFS*_ADJ
ADR_PD _MSK
MASK
PULSE
SUS_MUTE
ADRS_P
OR
ADR_PD1
V+3VACTV
MODULE
M30620
D16
Pulse Width
SQ_NON
WE_SQ
D15
D14
D13
LVDS
STOP_SQ
YSUS
D26
UART(CS
DET_CS
UART SW
ODI_R_G_B
SQ_SEL
RELAY2
MULTI_OE
UART
D12
DRIVER IC IC1651
DRIVER IC IC1661
DRIVER IC IC1671
DRIVER IC IC1681
CLK / LE / HBLK LBLK/R/G/B
VADR1
VDDLS1
VADR2
VDDLS2
VADR3
VDDLS3
VADR4
VDDLS4
RESONANCE BLOCK
V+75V
V+3.3V
V+10V
IC1601 LVDS RECEIVER
AN/P BN/P CN/P DN/P CLKN/P
AD2 CN1601
AD1 CN1602
ADDRESS L ASSY
AD1 CN1802
AD2 CN1801
ADDRESS S ASSY
IC1801 LVDS RECEIVER
DRIVER IC IC1871
DRIVER IC IC1861
DRIVER IC IC1851



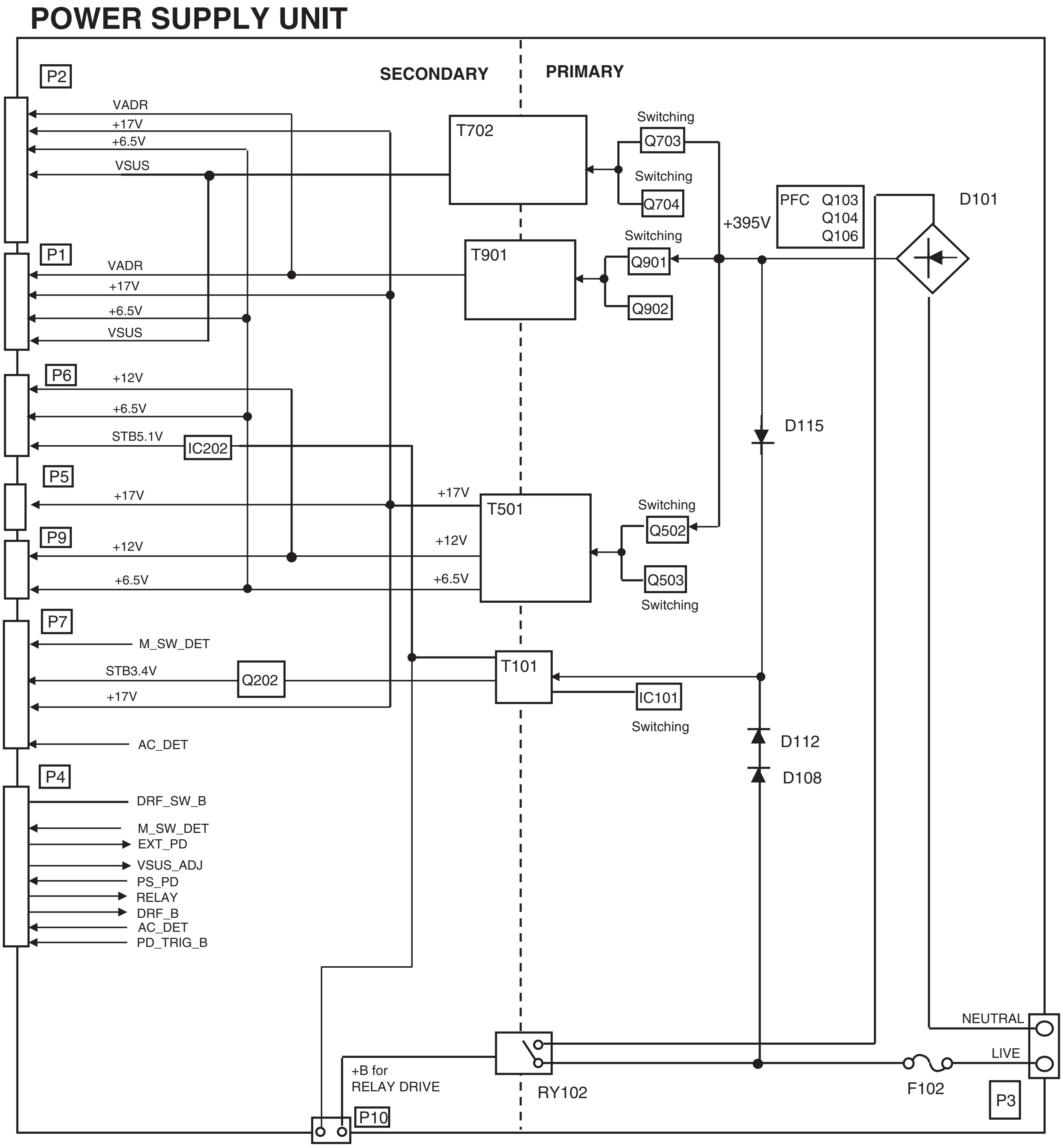
POWER SUPPLY UNIT
PRIMARY
Switching Q703
Switching Q704
Switching Q901
Q902
Switching Q502
Q503
PFC Q103 Q104 Q106
D101
+395V
D115
IC101
D112
D108
NEUTRAL
LIVE
F102
+B FOR RELAY DRIVE
RY102
P3
P10
X DRIVE ASSY
X 4
VADR
X 2
VSUS
+17V
+5V
REG
+6.5V
X 1
LOGIC BLOCK
Drive Signal
SUS PreDrive
VPU
Gate Signal
XPRST
SUS BLOCK
SOFT-D
RESONANCE BLOCK
PSUS
OFFSET BLOCK
VPOFS
15V DC/DC CONV.
OFFSET Reg.
VXKOFS1
VXKOFS2
X 3
AC INLET
POWER SW ASSY
SW2
A
B
C
D
E
F
D25
D23
V+12V
RELAY
PS_PD
DRF_B
PD_TRG_B
AC_DET_M_SW_DET
DRF_SW_B
OR
RELAY1
KDD
AND
PSW1
DC-DC CONVERTER BD8606FV IC3801
V+6_5
PSW2
PD
EXT_PD
PSW21
X****_PD
PSIZE
D22
SUS_MUT
ADRS_P
PD_MUTE
V+3VACTV
MODULE UCOM M30620FCSGP
RESET
V+3V_D
RST2
RST_SQ
RESETX
V+3_3V_D
V+10V
D20
D19
D18
D17
V+1_2V_D
V+2_5V_D
V+3_3V_D
LVDS TRANSMITTER PEG478A-K IC3401
LVDS
Flash Memory
SUB-FILD CONV. & XY DRV SEQUENCE PATTERN GEN. PEG383B-K IC3301
XSUS
GPIO8
VDI
RELAY2
MULTI_OE
UART
THEATE
EVI_R_G_B
EVI_SYNC
D11
DIGITAL ASSY
DRIVER IC IC1651
DRIVER IC IC1661
DRIVER IC IC1671
DRIVER IC IC1681
CLK / LE / HBLK LBLK/R/G/B
VADR1 VDDLS1
VADR2 VDDLS2
VADR3 VDDLS3
VADR4 VDDLS4
RESONANCE BLOCK
V+75V
V+3.3V
IC1601 LVDS RECEIVER
V+10V
AN/P BN/P CN/P DN/P CLKN/P
AD2 CN1601
AD1 CN1602
ADDRESS L ASSY
DRIVER IC IC1851
DRIVER IC IC1861
DRIVER IC IC1871
IC1801 LVDS RECEIVER
AD2 CN1801
AD1 CN1802
ADDRESS S ASSY

4.4 OVERALL BLOCK DIAGRAM (2/2)

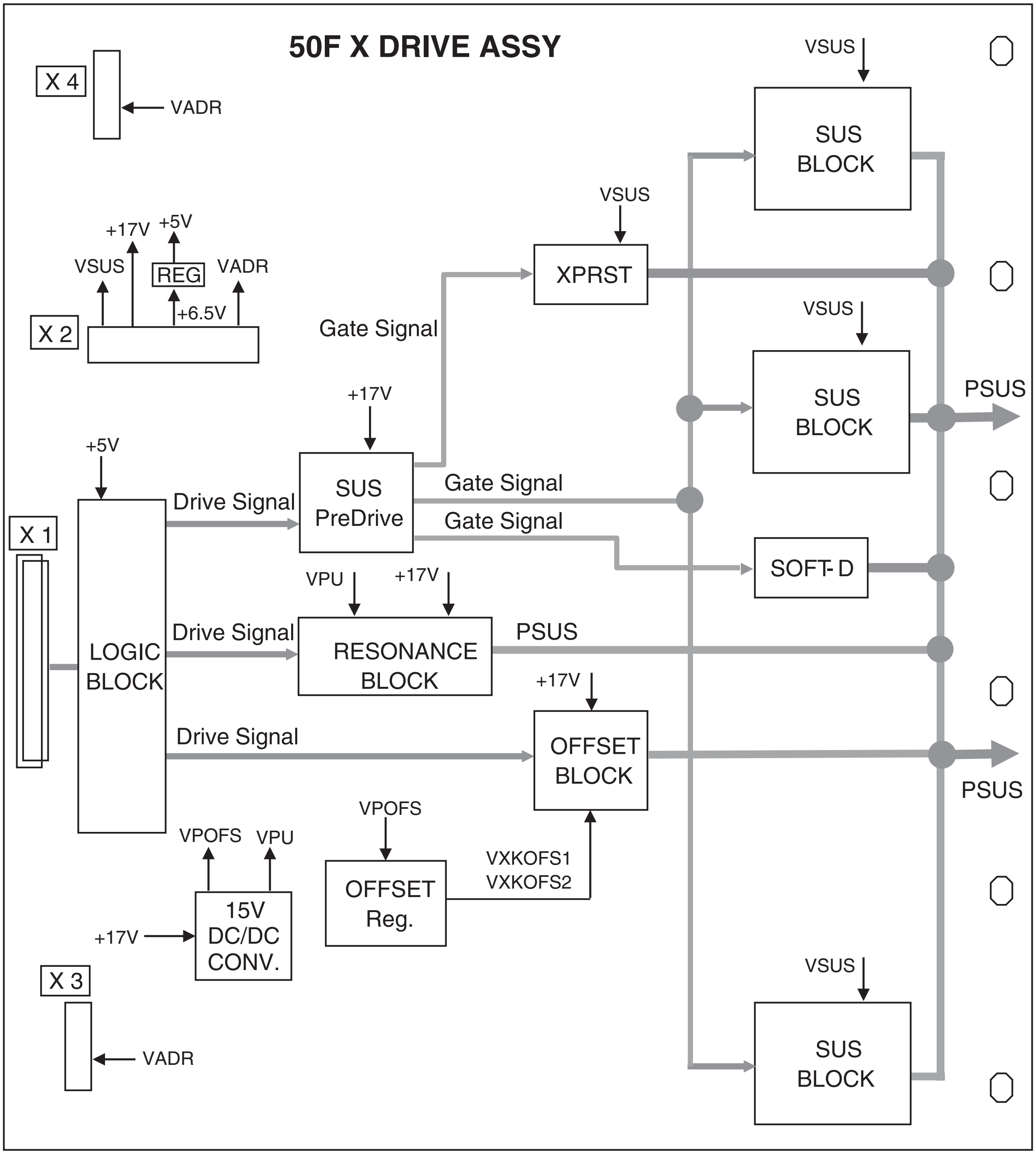

Analog Audio signal
Analog Video signal
Component signal
Digital Video signal
Digital Audio signal
Synchronized signal
Data signal
Control signal
IF signal
MAIN ASSY
U5301
AXF1192
(Tuner)
D_IF1
D_IF2
IC5401
DRX3975D
(COFDM)
AIR-SIF
I2S
SPDIF
A_TUNER_V
DT_MON_CVBS
AUDIO_OUT_L/R
JA7804
Audio Out
L/R IN
CVBS
SCART1_OUT_V
RAPID_SW1
JA7701
Input1 SCART
AIR OUT L/R
SLOW_SW1
CVBS
IC5701
TC90173FG
(VBI Slicer)
L/R IN
CVBS
Y/C
JA7702
Input2 SCART
SCART2_OUT_V
AIR OUT L/R
SLOW_SW2
EMMA_DA_GY
L/R IN
CVBS
Y/C
SCART3_OUT_V
JA7703
Input3 SCART
AIR OUT L/R
RAPID_SW3
SLOW_SW3
IC8001
R2S11006FT
(AVSW)
Main Y/C
Sub Y/C
IC8201
MSP5651M
(MSP)
SIDE IO Assy
L/R IN
JA8601
Input5
CVBS
HP_L/R OUT
CN8602
Head Phone
IC4702
CM0048BF
(VDEC)
IC4701
HY57V641620FTP
64Mbit(SDRAM)
COMP_Y
SW OUT
JA7804
SUB WOOFER
L/R IN
JA7803
Audio Input for
INPUT2 Component
RGB
CLP
FB
Input1 RGB
Input3 RGB
PC_L/R IN
JA7802
Audio Input for PC
OPT_OUT
JA7881
SPDIF
RAPID_SW1/3
SLOW_SW1/2/3
IC8101
R2S11001FT
(RGBSW)
IC4801
AD9985KSTZ
(ADC)
CLP,H
JA7805
INPUT2 Component
Input2 Y/Cb/Cr
RGB
/YPbPr
CLP
PC Assy
CN9601
PC Input
PC_RGB
PC_H/V
SPDIF
IC4901
SII9125CTU
(HDMI RX)
IC5001
CXB1444R
(HDMI SW)
IC8401
TAS5122DCA
(D-AMP)
JA8551
SPEAKER TERMINAL
INPUT1
HDMI
INPUT3
HDMI
INPUT4
HDMI
IO_AUDIO Assy


FAN
FAN
FAN
FAN
Fan Connect
FAN CONNECT ASSY
FAN RESERVED
SIDE KEY ASSY
KEY
KEY1
KEY2
LED ASSY
LED
IR ASSY
IR
REM
USB
M6
CN4107
M5
CN4202
M10
CN4201
IC5801
M66596FP
IC6811
AGC1072
(M30620FCSGP)
IF UCOM
M11
CN4209
M15
CN4208
RLS ASSY
RLS
RLS
SR_OUT
TXD_SR
RXD_SR
SR_OUT
TXD_232C
RXD_232C
RS232C
IO_AUDIO ASSY
IC7003
uPD61123F1
(EMMAIISV)
IC7201
K4H510838D
(512Mbit DDR)
IC7204
K4H510838D
(512Mbit DDR)
IC7202
AGC1075
(S29GL064N90TFI04)
(64Mbit FLASH)
IC7205
AGC1076
(S29GL064N90TFI04)
(64Mbit FLASH)
RDATA
DIN7 OSD 8bit *4
DIN1_656 (8bit)
RGB 10bit *3
RGB 10bit *3
To DIGITAL Ass'y
IC6702
EDD1232ABBH
128Mbit (DDR)
IC6703
EDD1232ABBH
128Mbit (DDR)
IC6704
EDD1232ABBH
128Mbit (DDR)
IC6701
AGC1079
(S29GL016A90TFIR2)
16Mbit Flash
DIN3_656DATA (10bit)
DIN4_656DATA (8bit)
IC6501
PD6568A
(ARIA)
EMMA_DA_GY / BCB / RCR
DIN2 (8bit*3)
INT H/V, EXT H/V
DIN6 (12bit *3)

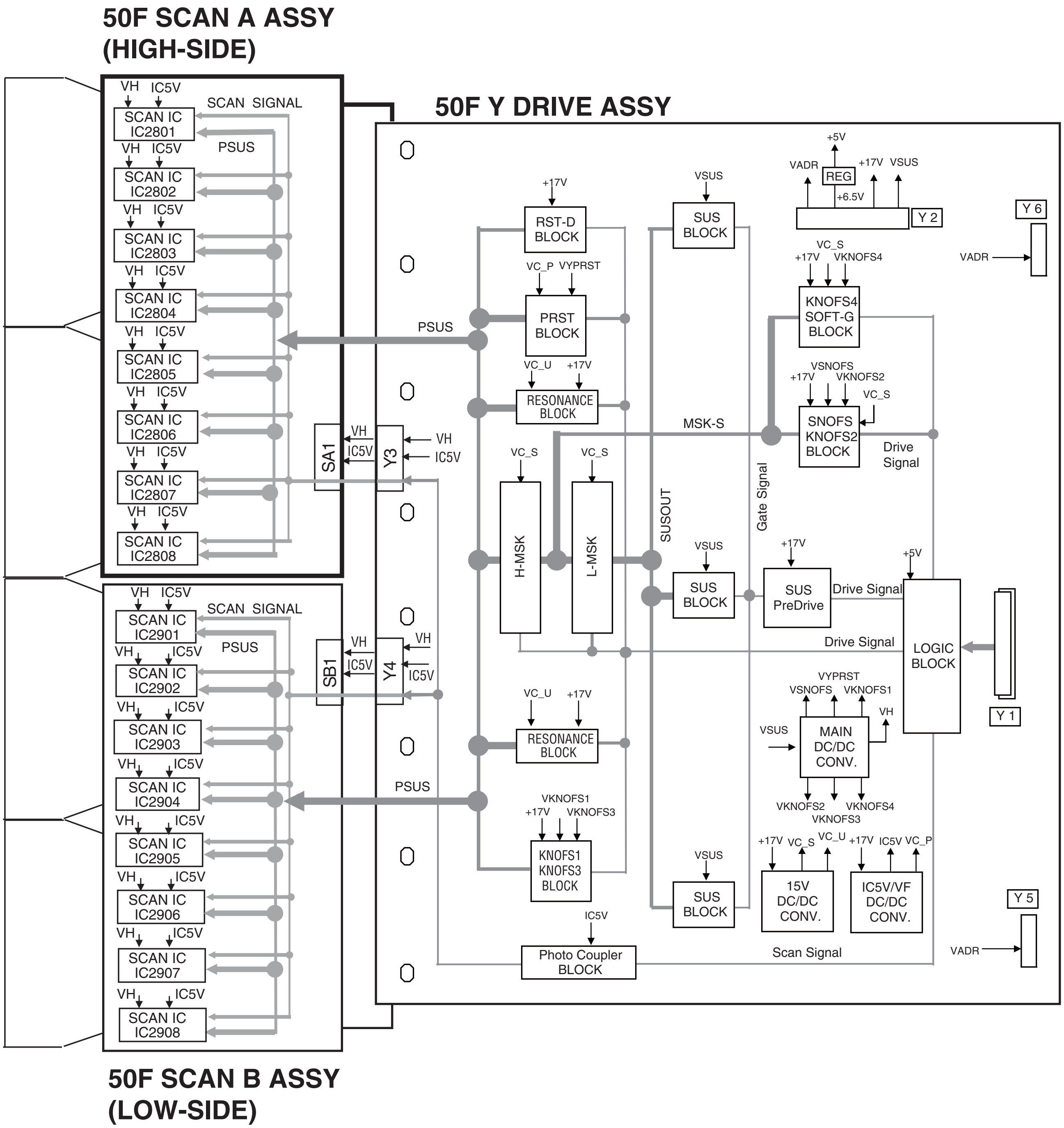
4.5 POWER SUPPLY UNIT


POWER SUPPLY UNIT
SECONDARY
PRIMARY
P2
VADR
+17V
+6.5V
VSUS
T702
Switching
Q703
Switching
Q704
PFC Q103 Q104 Q106
D101
+395V
P1
VADR
+17V
+6.5V
VSUS
T901
Switching
Q901
Q902
P6
+12V
+6.5V
STB5.1V
IC202
D115
P5
+17V
+17V
T501
Switching
Q502
P9
+12V
+12V
+6.5V
+6.5V
Q503
Switching
P7
M_SW_DET
STB3.4V
Q202
T101
+17V
IC101
Switching
AC_DET
D112
D108
P4
DRF_SW_B
M_SW_DET
EXT_PD
VSUS_ADJ
PS_PD
RELAY
DRF_B
AC_DET
PD_TRIG_B
NEUTRAL
LIVE
+B for
RELAY DRIVE
RY102
F102
P3
P10

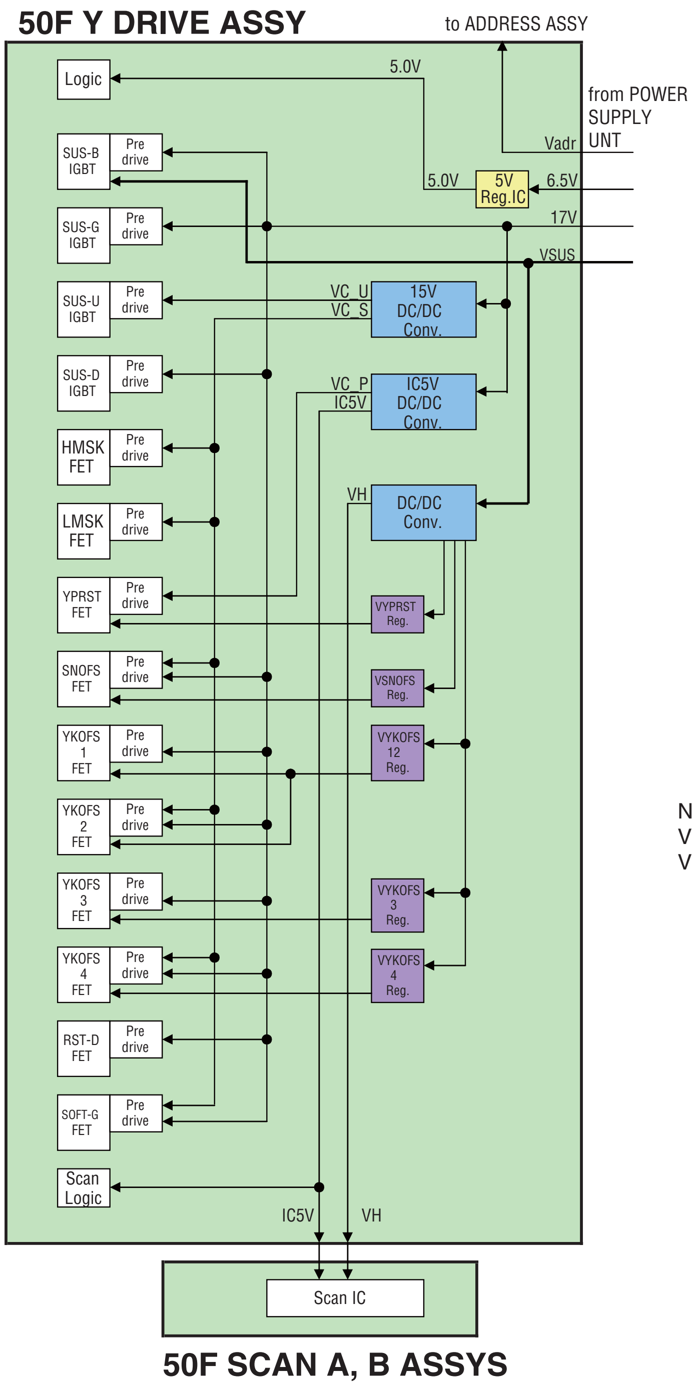
4.6 50F X DRIVE ASSY

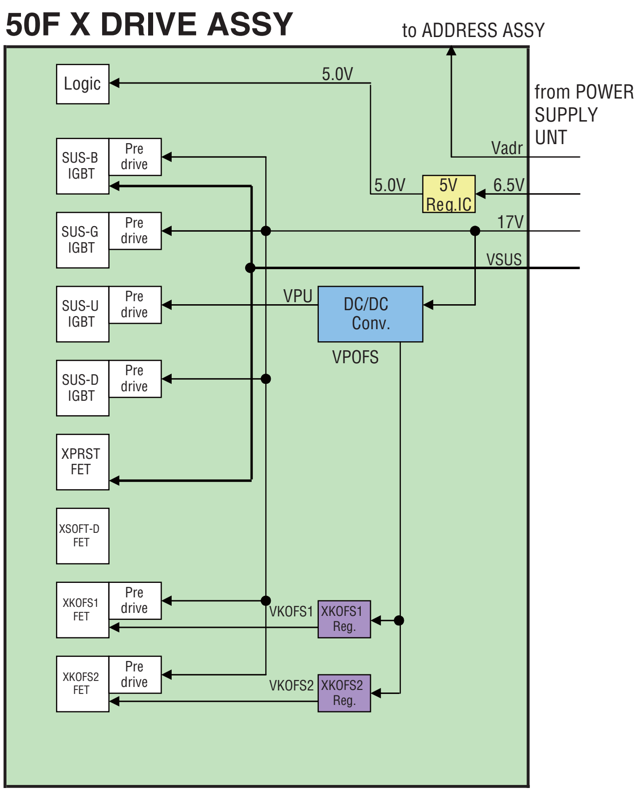

50F X DRIVE ASSY
X 4
VADR
X 2
VSUS
+17V
+5V
REG
+6.5V
VADR
X 1
+5V
LOGIC BLOCK
Drive Signal
Drive Signal
Drive Signal
SUS PreDrive
+17V
Gate Signal
Gate Signal
Gate Signal
XPRST
VSUS
SUS BLOCK
VSUS
SUS BLOCK
VSUS
PSUS
SOFT-D
VPU
+17V
RESONANCE BLOCK
PSUS
+17V
OFFSET BLOCK
PSUS
VPOFS
VPU
15V DC/DC CONV.
+17V
VPOFS
OFFSET Reg.
VXKOFS1
VXKOFS2
X 3
VADR
SUS BLOCK
VSUS

4.7 50F Y DRIVE, 50F SCAN A and B ASSYS


50F SCAN A ASSY
(HIGH-SIDE)
50F Y DRIVE ASSY
VH IC5V
SCAN SIGNAL
PSUS
SCAN IC IC2801
SCAN IC IC2802
SCAN IC IC2803
SCAN IC IC2804
SCAN IC IC2805
SCAN IC IC2806
SCAN IC IC2807
SCAN IC IC2808
SA1
Y3
SCAN IC IC2901
SCAN IC IC2902
SCAN IC IC2903
SCAN IC IC2904
SCAN IC IC2905
SCAN IC IC2906
SCAN IC IC2907
SCAN IC IC2908
SB1
Y4
RST-D BLOCK
+17V
VC_P VYPRST
PRST BLOCK
VC_U +17V
RESONANCE BLOCK
VSUS
SUS BLOCK
MSK-S
VC_S
H-MSK
L-MSK
SUSOUT
Gate Signal
+5V
VADR
REG
+6.5V
+17V VSUS
Y 2
Y 6
VADR
VC_S
+17V VKNOFS4
KNOFS4 SOFT-G BLOCK
VSNOFS
+17V VKNOFS2
VC_S
SNOFS KNOFS2 BLOCK
Drive Signal
SUS PreDrive
Drive Signal
LOGIC BLOCK
Y 1
VYPRST
VSNOFS VKNOFS1
VH
VSUS
MAIN DC/DC CONV.
VKNOFS2 VKNOFS4
VKNOFS3
VKNOFS1
+17V VKNOFS3
KNOFS1 KNOFS3 BLOCK
+17V VC_S VC_U +17V IC5V VC_P
15V DC/DC CONV.
IC5V/VF DC/DC CONV.
Y 5
VADR
IC5V
Photo Coupler BLOCK
Scan Signal
50F SCAN B ASSY
(LOW-SIDE)

4.8 POWER SUPPLY BLOCK of 50F X, Y DRIVE and 50F SCAN A and B ASSYS

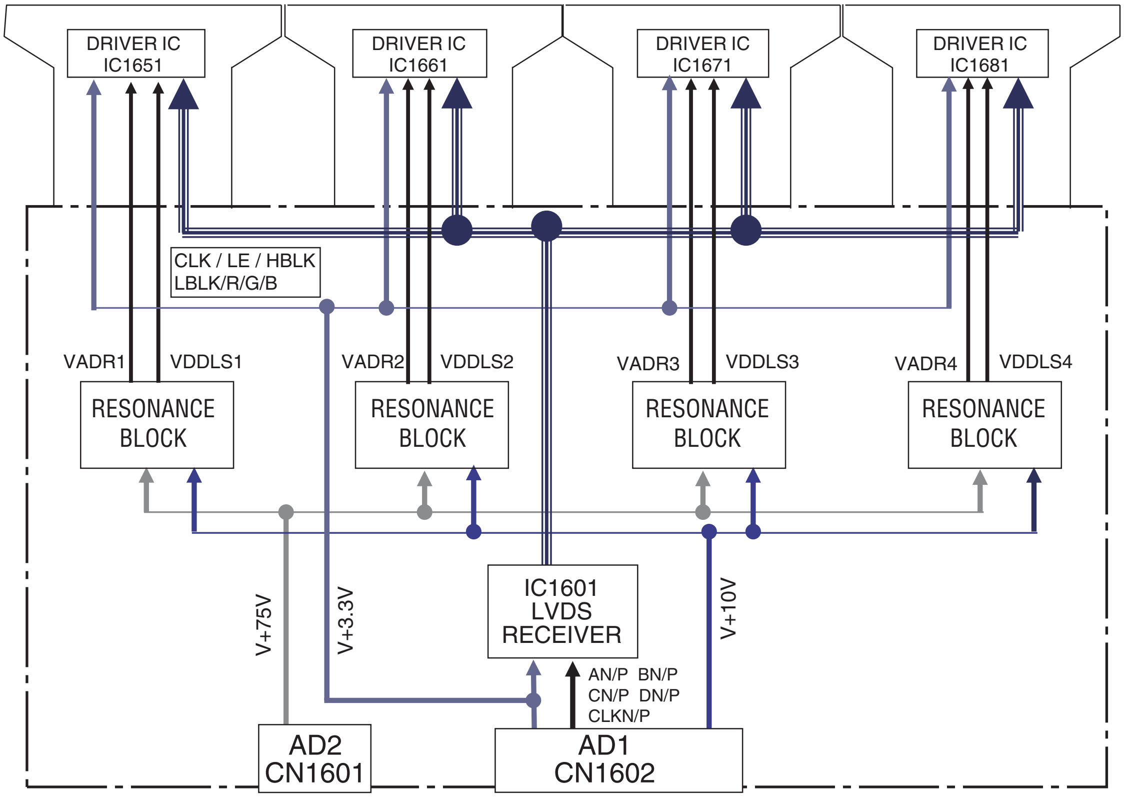

50F Y DRIVE ASSY
to ADDRESS ASSY
from POWER SUPPLY UNT
Logic
5.0V
Vadr
5.0V
5V Reg.IC
6.5V
17V
VSUS
SUS-B IGBT
SUS-G IGBT
SUS-U IGBT
SUS-D IGBT
HMSK FET
LMSK FET
YPRST FET
SNOFS FET
YKOFS 1 FET
YKOFS 2 FET
YKOFS 3 FET
YKOFS 4 FET
RST-D FET
SOFT-G FET
Scan Logic
Pre drive
VC_U
VC_S
15V DC/DC Conv.
VC_P
IC5V
IC5V DC/DC Conv.
VH
DC/DC Conv.
VYPRST Reg.
VSNOFS Reg.
VYKOFS 12 Reg.
VYKOFS 3 Reg.
VYKOFS 4 Reg.
IC5V
VH
Scan IC
50F SCAN A, B ASSYS


50F X DRIVE ASSY
to ADDRESS ASSY
from POWER SUPPLY UNT
Logic
5.0V
Vadr
5.0V
5V Reg.IC
6.5V
17V
VSUS
SUS-B IGBT
SUS-G IGBT
SUS-U IGBT
SUS-D IGBT
XPRST FET
XSOFT-D FET
XKOFS1 FET
XKOFS2 FET
Pre drive
VPU
DC/DC Conv.
VPOFS
VKOFS1
XKOFS1 Reg.
VKOFS2
XKOFS2 Reg.

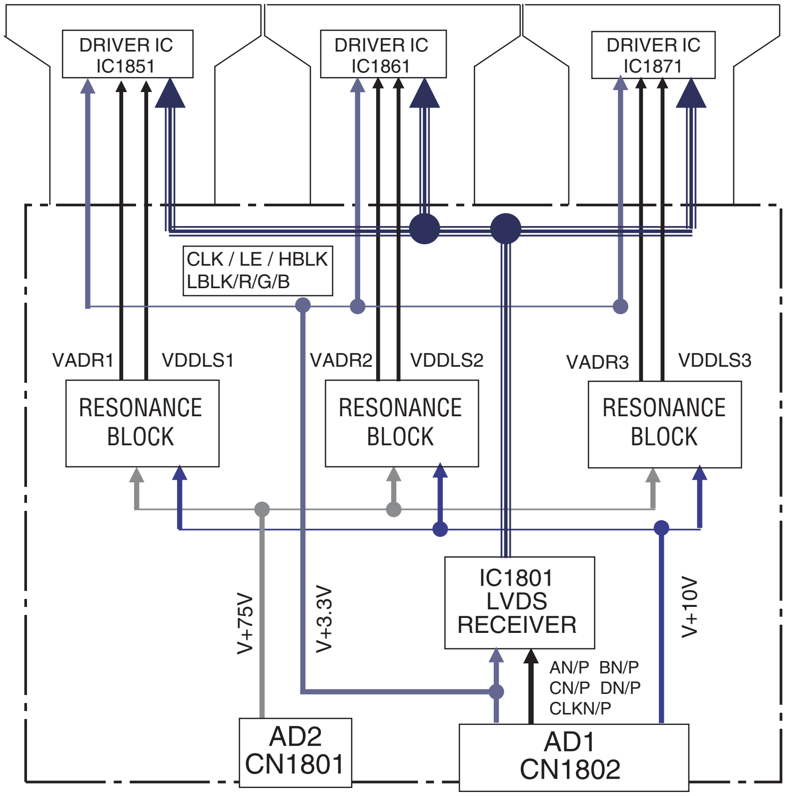
Note:
VYPRST, VSNOFS, VYKOFS12, VYKOFS3, VYKOFS4
VXKOFS1 and VXKOFS2 voltages are electrical volume controls.

4.9 50F ADDRESS L and S ASSYS

50F ADDRESS L ASSY

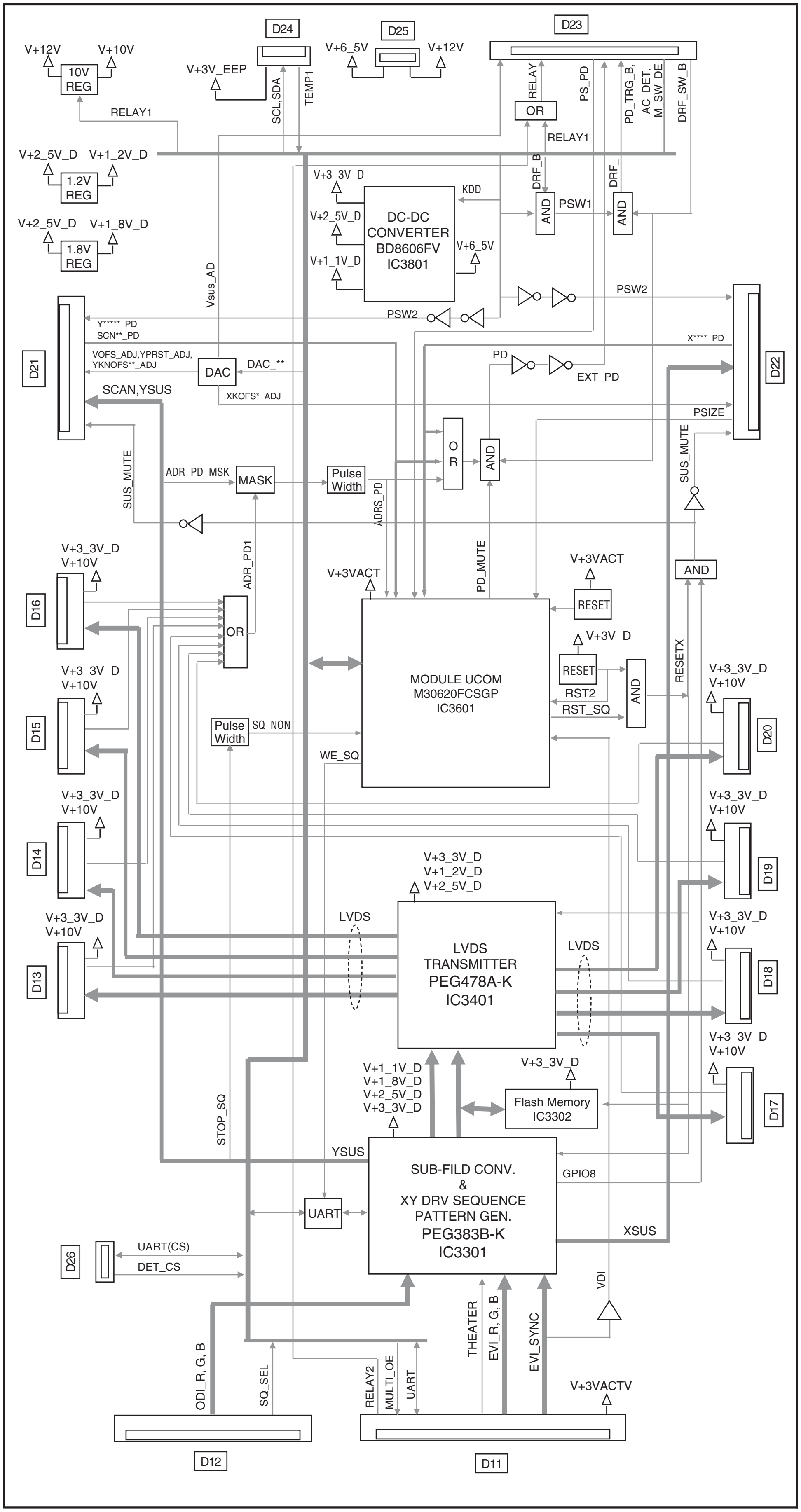

DRIVER IC
IC1651
DRIVER IC
IC1661
DRIVER IC
IC1671
DRIVER IC
IC1681
CLK / LE / HBLK
LBLK/R/G/B
VADR1
VDDLS1
VADR2
VDDLS2
VADR3
VDDLS3
VADR4
VDDLS4
RESONANCE BLOCK
RESONANCE BLOCK
RESONANCE BLOCK
RESONANCE BLOCK
V+75V
V+3.3V
IC1601
LVDS
RECEIVER
V+10V
AN/P BN/P
CN/P DN/P
CLKN/P
AD2
CN1601
AD1
CN1602

50F ADDRESS S ASSY


DRIVER IC
IC1851
DRIVER IC
IC1861
DRIVER IC
IC1871
CLK / LE / HBLK
LBLK/R/G/B
VADR1
VDDLS1
VADR2
VDDLS2
VADR3
VDDLS3
RESONANCE BLOCK
RESONANCE BLOCK
RESONANCE BLOCK
V+75V
V+3.3V
IC1801
LVDS
RECEIVER
V+10V
AN/P BN/P
CN/P DN/P
CLKN/P
AD2
CN1801
AD1
CN1802

4.10 50F DIGITAL ASSY

50F DIGITAL ASSY


D24
D25
D23
V+12V
V+10V
10V REG
V+3V_EEP
V+6_5V
V+12V
RELAY1
SCL,SDA
TEMP1
RELAY
PS_PD
PD_TRG_B,
AC_DET,
M_SW_DE
DRF_SW_B
OR
RELAY1
V+2_5V_D
V+1_2V_D
1.2V REG
V+2_5V_D
V+1_8V_D
1.8V REG
V+3_3V_D
V+2_5V_D
V+1_1V_D
DC-DC CONVERTER BD8606FV IC3801
KDD
V+6_5V
DRF_B
DRF_
AND
PSW1
AND
Vsus_AD
PSW2
PSW2
Y*****_PD
SCN**_PD
X****_PD
D21
VOFS_ADJ,YPRST_ADJ,
YKNOFS**_ADJ
DAC
DAC_**
PD
EXT_PD
D22
SCAN,YSUS
XKOFS*_ADJ
PSIZE
SUS_MUTE
ADR_PD_MSK
MASK
Pulse Width
ADRS_PD
O R
AND
SUS_MUTE
ADR_PD1
V+3_3V_D
V+10V
D16
OR
V+3VACT
PD_MUTE
V+3VACT
RESET
AND
V+3V_D
RESET
AND
RST2
RST_SQ
RESETX
MODULE UCOM M30620FCSGP IC3601
V+3_3V_D
V+10V
D15
Pulse Width
SQ_NON
WE_SQ
V+3_3V_D
V+10V
D20
V+3_3V_D
V+10V
D14
V+3_3V_D
V+10V
D19
V+3_3V_D
V+1_2V_D
V+2_5V_D
V+3_3V_D
V+10V
D13
LVDS
LVDS TRANSMITTER PEG478A-K IC3401
LVDS
V+3_3V_D
V+10V
D18
V+3_3V_D
V+10V
D17
V+1_1V_D
V+1_8V_D
V+2_5V_D
V+3_3V_D
V+3_3V_D
Flash Memory IC3302
STOP_SQ
YSUS
SUB-FILD CONV. & XY DRV SEQUENCE PATTERN GEN. PEG383B-K IC3301
GPIO8
UART
XSUS
D26
UART(CS)
DET_CS
VDI
THEATER
EVI_R, G, B
EVI_SYNC
ODI_R, G, B
SQ_SEL
RELAY2
MULTI_OE
UART
V+3VACTV
D12
D11

A

B

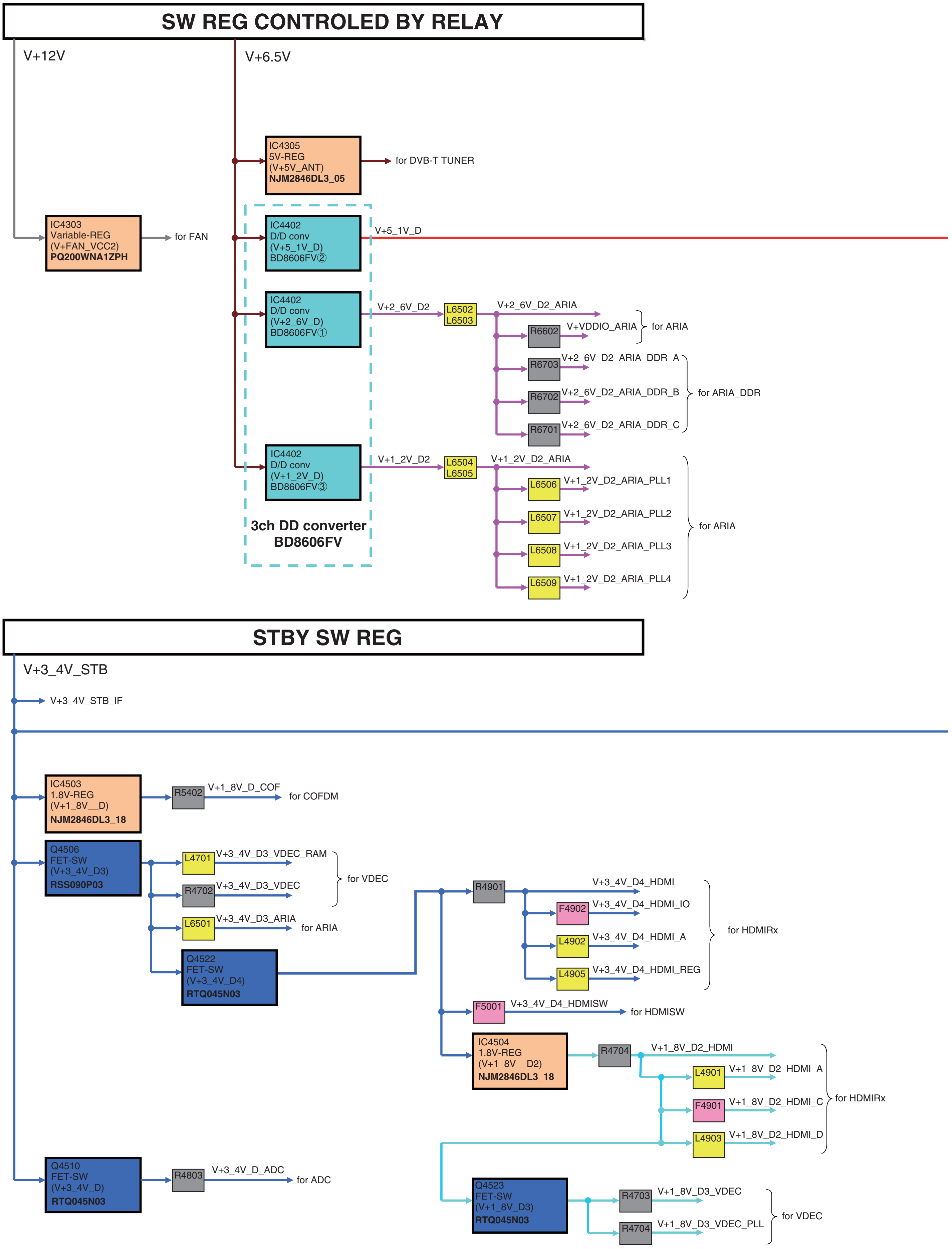
C

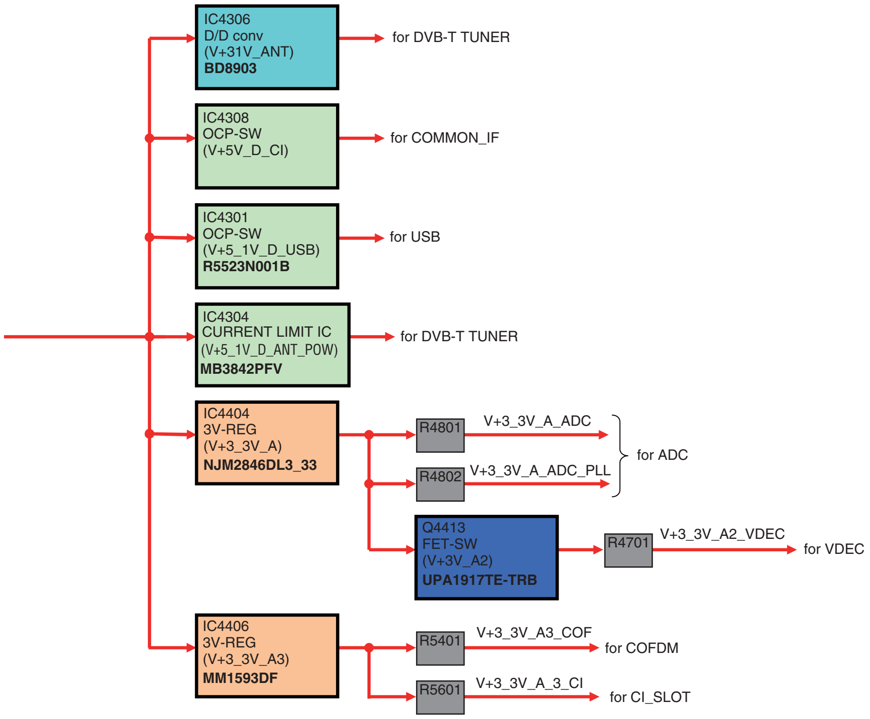
D

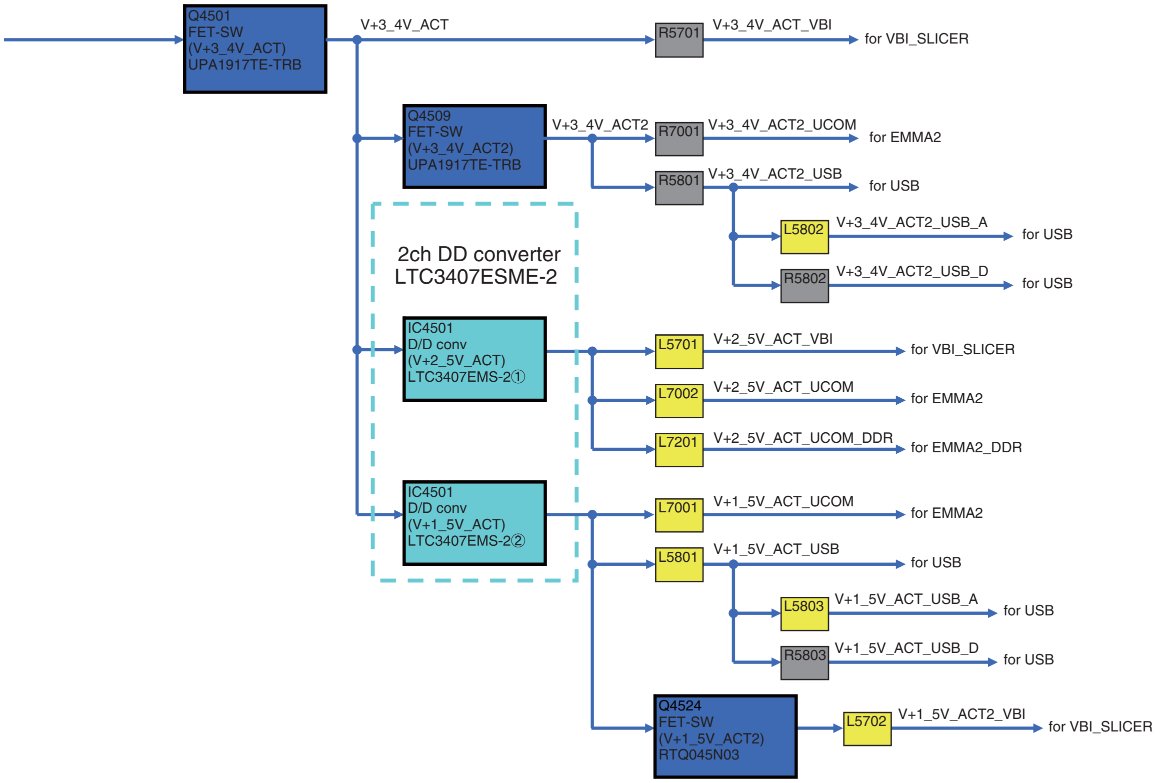
E

F

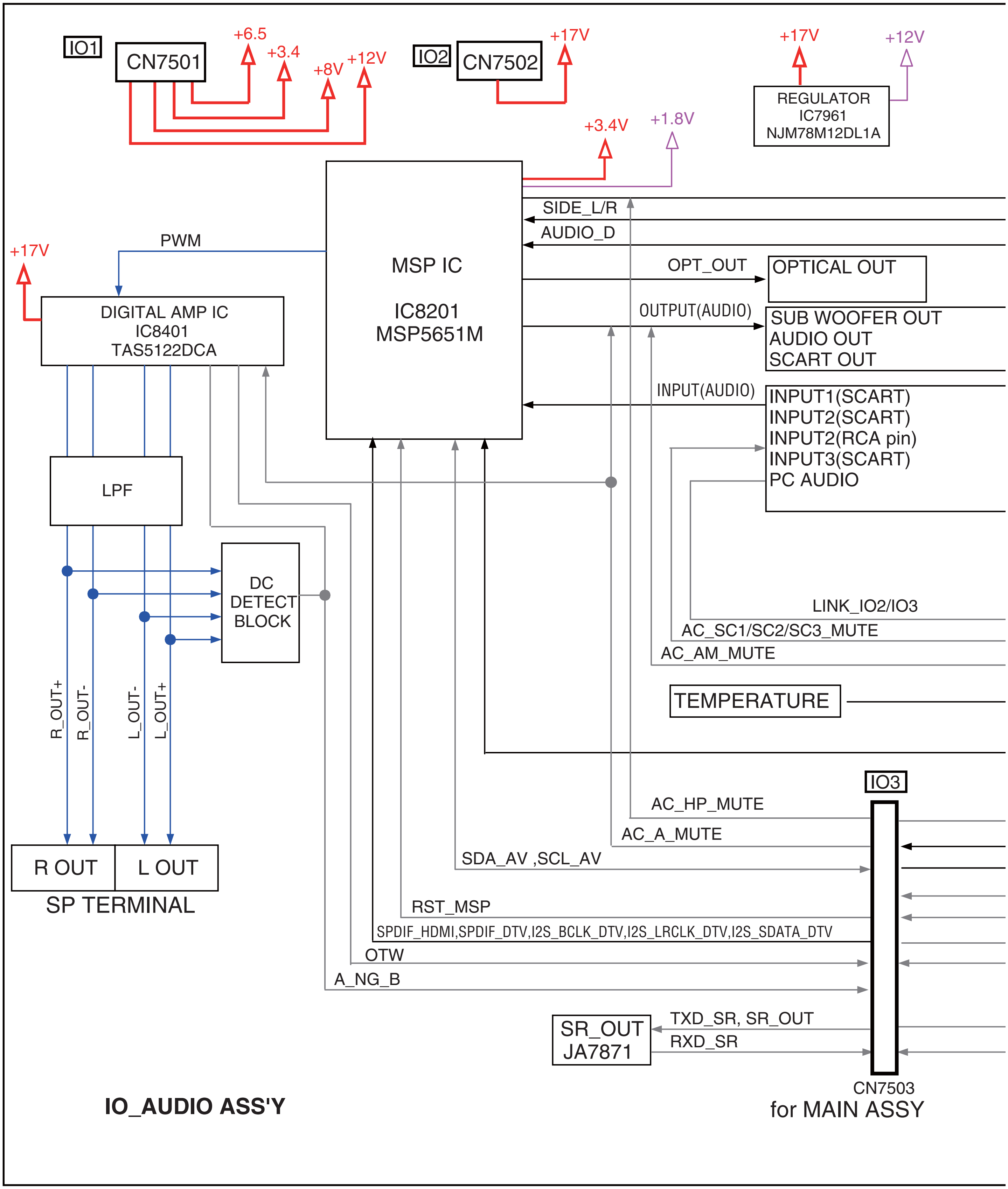
4.11 POWER SUPPLY BLOCK of MAIN ASSY

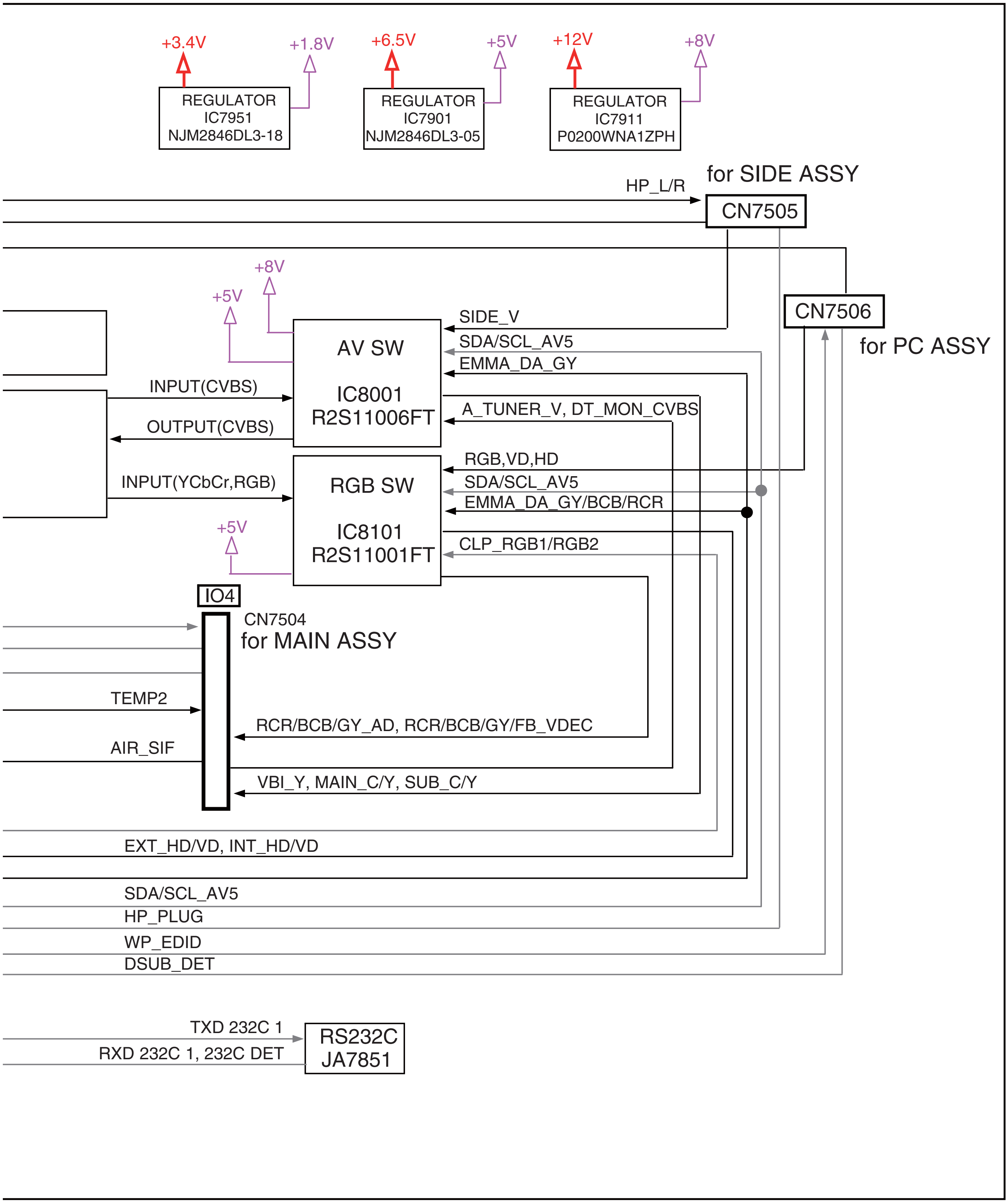

SW REG CONTROLED BY RELAY
V+12V
V+6.5V
IC4305
5V-REG
(V+5V_ANT)
NJM2846DL3_05
for DVB-T TUNER
IC4303
Variable-REG
(V+FAN_VCC2)
PQ200WNA1ZPH
for FAN
IC4402
D/D conv
(V+5_1V_D)
BD8606FV②
V+5_1V_D
IC4402
D/D conv
(V+2_6V_D)
BD8606FV①
V+2_6V_D2
L6502
L6503
V+2_6V_D2_ARIA
R6602
V+VDDIO_ARIA
for ARIA
R6703
V+2_6V_D2_ARIA_DDR_A
R6702
V+2_6V_D2_ARIA_DDR_B
for ARIA_DDR
R6701
V+2_6V_D2_ARIA_DDR_C
IC4402
D/D conv
(V+1_2V_D)
BD8606FV③
V+1_2V_D2
L6504
L6505
V+1_2V_D2_ARIA
L6506
V+1_2V_D2_ARIA_PLL1
L6507
V+1_2V_D2_ARIA_PLL2
for ARIA
L6508
V+1_2V_D2_ARIA_PLL3
L6509
V+1_2V_D2_ARIA_PLL4
3ch DD converter
BD8606FV
STBY SW REG
V+3_4V_STB
V+3_4V_STB_IF
IC4503
1.8V-REG
(V+1_8V__D)
NJM2846DL3_18
R5402
V+1_8V_D_COF
for COFDM
Q4506
FET-SW
(V+3_4V_D3)
RSS090P03
L4701
V+3_4V_D3_VDEC_RAM
R4702
V+3_4V_D3_VDEC
for VDEC
L6501
V+3_4V_D3_ARIA
for ARIA
Q4522
FET-SW
(V+3_4V_D4)
RTQ045N03
R4901
V+3_4V_D4_HDMI
F4902
V+3_4V_D4_HDMI_IO
L4902
V+3_4V_D4_HDMI_A
for HDMIRx
L4905
V+3_4V_D4_HDMI_REG
F5001
V+3_4V_D4_HDMISW
for HDMISW
IC4504
1.8V-REG
(V+1_8V__D2)
NJM2846DL3_18
R4704
V+1_8V_D2_HDMI
L4901
V+1_8V_D2_HDMI_A
F4901
V+1_8V_D2_HDMI_C
for HDMIRx
L4903
V+1_8V_D2_HDMI_D
Q4510
FET-SW
(V+3_4V_D)
RTQ045N03
R4803
V+3_4V_D_ADC
for ADC
Q4523
FET-SW
(V+1_8V_D3)
RTQ045N03
R4703
V+1_8V_D3_VDEC
for VDEC
R4704
V+1_8V_D3_VDEC_PLL


IC4306
D/D conv
(V+31V_ANT)
BD8903
for DVB-T TUNER
IC4308
OCP-SW
(V+5V_D_CI)
for COMMON_IF
IC4301
OCP-SW
(V+5_1V_D_USB)
R5523N001B
for USB
IC4304
CURRENT LIMIT IC
(V+5_1V_D_ANT_POW)
MB3842PFV
for DVB-T TUNER
IC4404
3V-REG
(V+3_3V_A)
NJM2846DL3_33
R4801
V+3_3V_A_ADC
R4802
V+3_3V_A_ADC_PLL
for ADC
Q4413
FET-SW
(V+3V_A2)
UPA1917TE-TRB
R4701
V+3_3V_A2_VDEC
for VDEC
IC4406
3V-REG
(V+3_3V_A3)
MM1593DF
R5401
V+3_3V_A3_COF
for COFDM
R5601
V+3_3V_A_3_CI
for CI_SLOT

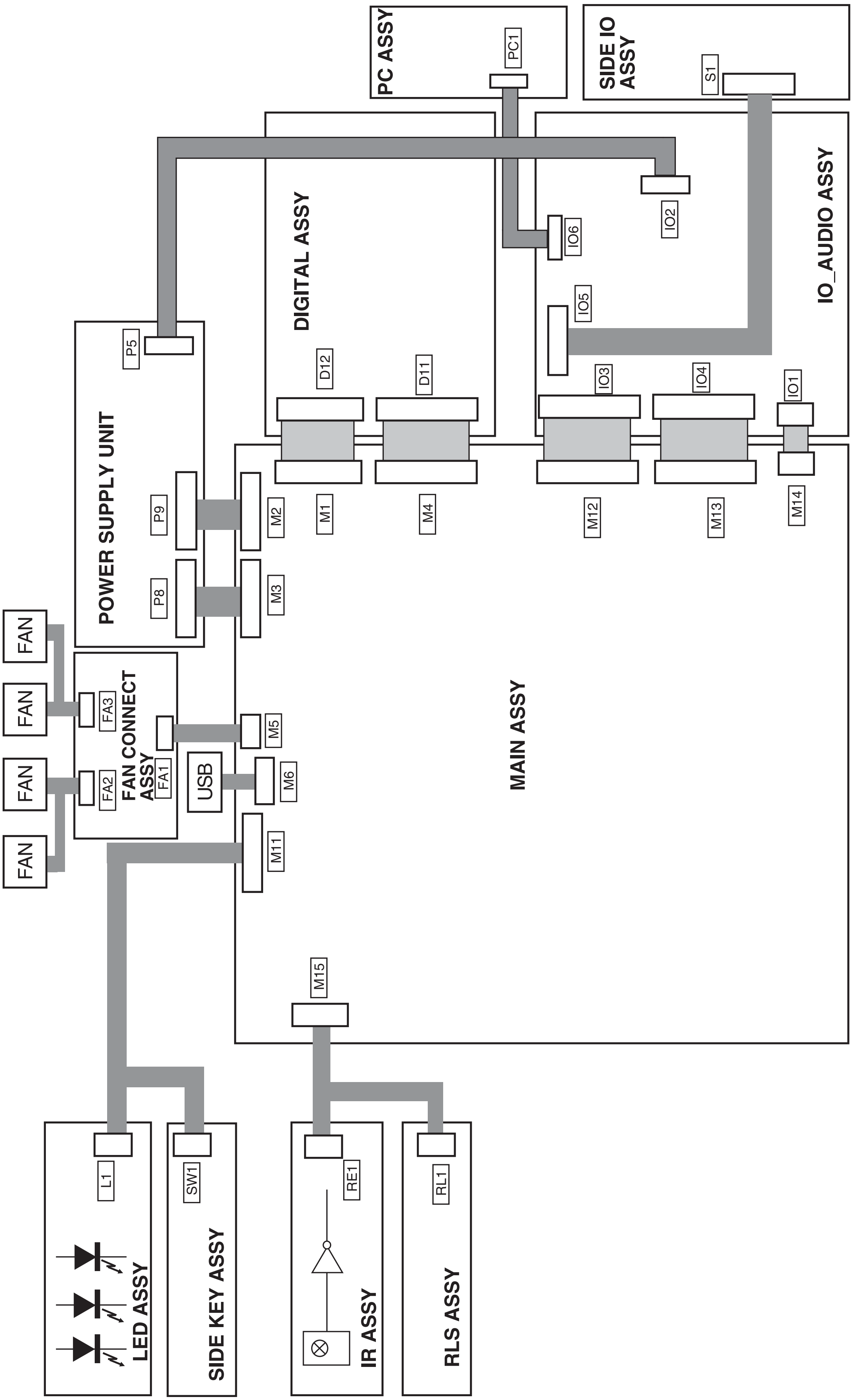

Q4501
FET-SW
(V+3_4V_ACT)
UPA1917TE-TRB
V+3_4V_ACT
R5701
V+3_4V_ACT_VBI
for VBI_SLICER
Q4509
FET-SW
(V+3_4V_ACT2)
UPA1917TE-TRB
V+3_4V_ACT2
R7001
V+3_4V_ACT2_UCOM
for EMMA2
R5801
V+3_4V_ACT2_USB
for USB
L5802
V+3_4V_ACT2_USB_A
for USB
R5802
V+3_4V_ACT2_USB_D
for USB
2ch DD converter
LTC3407ESME-2
IC4501
D/D conv
(V+2_5V_ACT)
LTC3407EMS-2①
L5701
V+2_5V_ACT_VBI
for VBI_SLICER
L7002
V+2_5V_ACT_UCOM
for EMMA2
L7201
V+2_5V_ACT_UCOM_DDR
for EMMA2_DDR
IC4501
D/D conv
(V+1_5V_ACT)
LTC3407EMS-2②
L7001
V+1_5V_ACT_UCOM
for EMMA2
L5801
V+1_5V_ACT_USB
for USB
L5803
V+1_5V_ACT_USB_A
for USB
R5803
V+1_5V_ACT_USB_D
for USB
Q4524
FET-SW
(V+1_5V_ACT2)
RTQ045N03
L5702
V+1_5V_ACT2_VBI
for VBI_SLICER

4.12 IO_AUDIO ASSY


IO1
CN7501
+6.5
+3.4
+8V
+12V
IO2
CN7502
+17V
+17V
+12V
REGULATOR
IC7961
NJM78M12DL1A
+3.4V
+1.8V
MSP IC
IC8201
MSP5651M
SIDE_L/R
AUDIO_D
OPT_OUT
OPTICAL OUT
OUTPUT(AUDIO)
SUB WOOFER OUT
AUDIO OUT
SCART OUT
INPUT(AUDIO)
INPUT1(SCART)
INPUT2(SCART)
INPUT2(RCA pin)
INPUT3(SCART)
PC AUDIO
+17V
PWM
DIGITAL AMP IC
IC8401
TAS5122DCA
LPF
DC
DETECT
BLOCK
R_OUT+
R_OUT-
L_OUT-
L_OUT+
R OUT
L OUT
SP TERMINAL
LINK_IO2/IO3
AC_SC1/SC2/SC3_MUTE
AC_AM_MUTE
TEMPERATURE
IO3
AC_HP_MUTE
AC_A_MUTE
SDA_AV ,SCL_AV
RST_MSP
SPDIF_HDMI,SPDIF_DTV,I2S_BCLK_DTV,I2S_LRCLK_DTV,I2S_SDATA_DTV
OTW
A_NG_B
SR_OUT
JA7871
TXD_SR, SR_OUT
RXD_SR
CN7503
for MAIN ASSY
IO_AUDIO ASS'Y


+3.4V
+1.8V
REGULATOR
IC7951
NJM2846DL3-18
+6.5V
+5V
REGULATOR
IC7901
NJM2846DL3-05
+12V
+8V
REGULATOR
IC7911
P0200WNA1ZPH
for SIDE ASSY
HP_L/R
CN7505
CN7506
for PC ASSY
+8V
+5V
SIDE_V
SDA/SCL_AV5
EMMA_DA_GY
AV SW
IC8001
R2S11006FT
INPUT(CVBS)
OUTPUT(CVBS)
A_TUNER_V, DT_MON_CVBS
RGB,VD,HD
SDA/SCL_AV5
EMMA_DA_GY/BCB/RCR
RGB SW
IC8101
R2S11001FT
INPUT(YCbCr,RGB)
+5V
CLP_RGB1/RGB2
IO4
CN7504
for MAIN ASSY
TEMP2
AIR_SIF
RCR/BCB/GY_AD, RCR/BCB/GY/FB_VDEC
VBI_Y, MAIN_C/Y, SUB_C/Y
EXT_HD/VD, INT_HD/VD
SDA/SCL_AV5
HP_PLUG
WP_EDID
DSUB_DET
TXD 232C 1
RXD 232C 1, 232C DET
RS232C
JA7851

4.13 LED and IR ASSYS

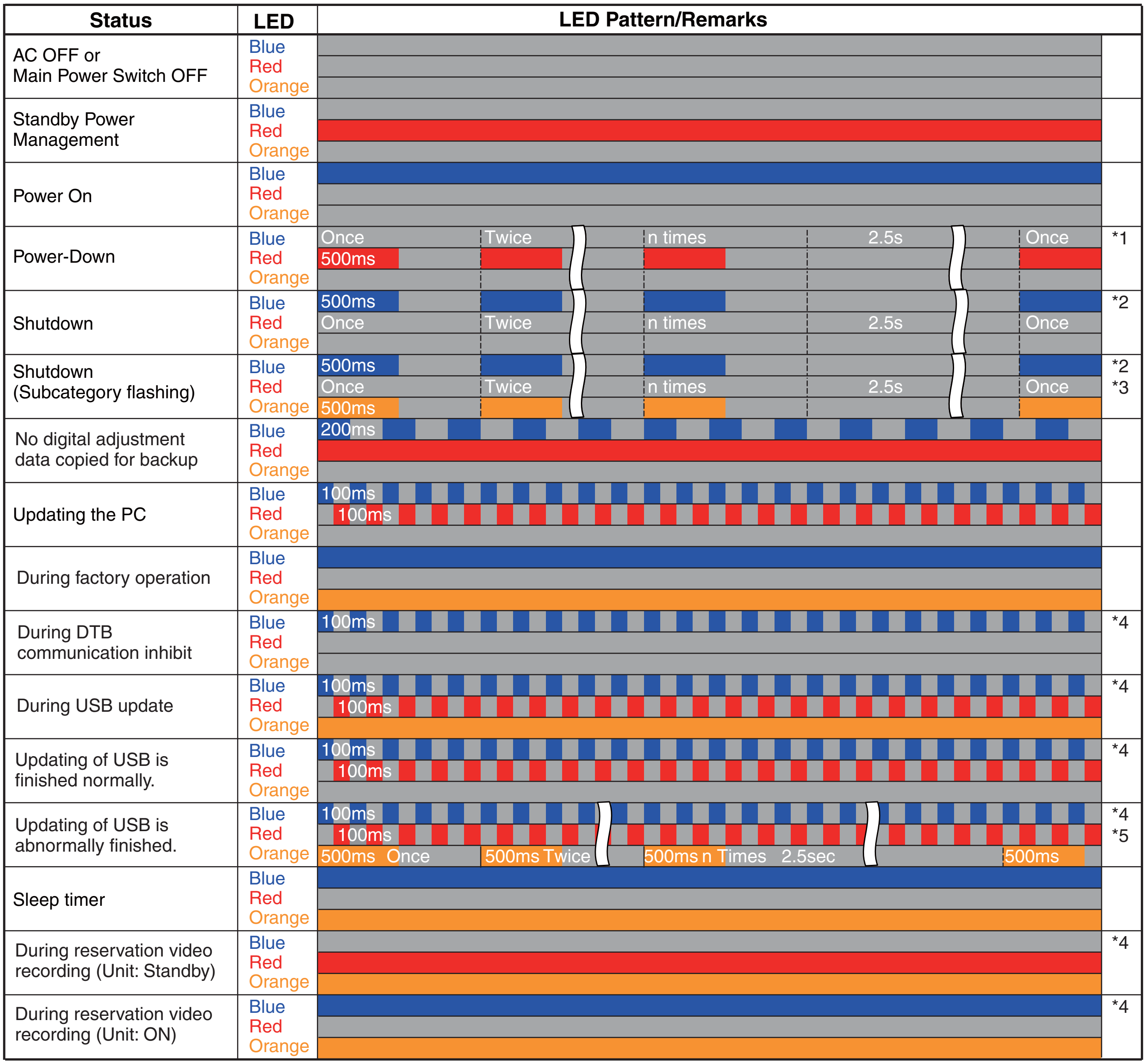

PC ASSY
PC1
SIDE IO ASSY
S1
DIGITAL ASSY
IO_AUDIO ASSY
IO2
IO6
IO5
D12
D11
IO3
IO4
IO1
POWER SUPPLY UNIT
P5
P9
P8
M2
M3
M1
M4
M12
M13
M14
FAN
FAN
FAN
FAN
FA3
FA2
FA1
FAN CONNECT ASSY
USB
M5
M6
M11
MAIN ASSY
M15
L1
SW1
RE1
RL1
LED ASSY
SIDE KEY ASSY
IR ASSY
RLS ASSY

5. DIAGNOSIS

5.1 POWER SUPPLY OPERATION

[1] LED DISPLAY INFORMATION

■ LED Pattern

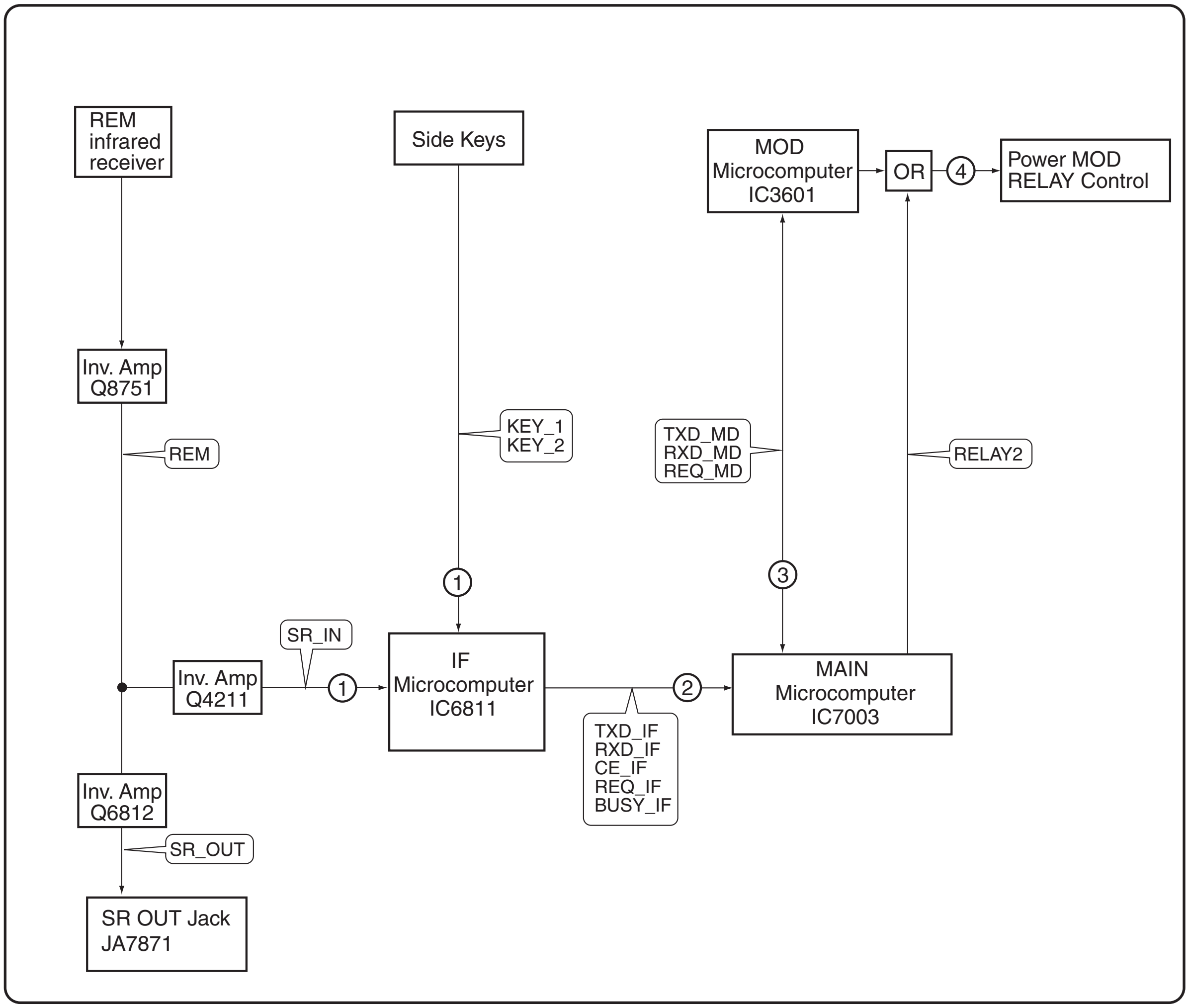


Status	LED	LED Pattern/Remarks	
AC OFF or Main Power Switch OFF	Blue		
	Red		
	Orange		
Standby Power Management	Blue		
	Red	🟥	
	Orange		
Power On	Blue	🟦	
	Red		
	Orange		
Power-Down	Blue	Once Twice n times 2.5s Once	*1
	Red	500ms	
	Orange		
Shutdown	Blue	500ms	*2
	Red	Once Twice n times 2.5s Once	
	Orange		
Shutdown (Subcategory flashing)	Blue	500ms	*2
	Red	Once Twice n times 2.5s Once	*3
	Orange	500ms	
No digital adjustment data copied for backup	Blue	200ms	
	Red	🟥	
	Orange		
Updating the PC	Blue	100ms	
	Red	100ms	
	Orange		
During factory operation	Blue	🟦	
	Red		
	Orange	🟧	
During DTB communication inhibit	Blue	100ms	*4
	Red		
	Orange		
During USB update	Blue	100ms	*4
	Red	100ms	
	Orange	🟧	
Updating of USB is finished normally.	Blue	100ms	*4
	Red	100ms	
	Orange		
Updating of USB is abnormally finished.	Blue	100ms	*4
	Red	100ms	*5
	Orange	500ms Once 500ms Twice 500ms n Times 2.5sec 500ms	
Sleep timer	Blue	🟦	
	Red		
	Orange	🟧	
During reservation video recording (Unit: Standby)	Blue		*4
	Red	🟥	
	Orange	🟧	
During reservation video recording (Unit: ON)	Blue	🟦	*4
	Red		
	Orange	🟧	

*1: Notify upon the power-down content by Red LED flashing number of times.
*2: Notify upon the shutdown content by Blue LED flashing number of times
*3: Notify upon the subcategory number by Orange LED flashing number of times.
*4: PDP-LX5090H only
*5: Notify upon the abnormal state by Orange LED flashing number of times.

POWER ON ● STANDBY ● TIMER ●

[2] POWER ON SEQUENCE


REM infrared receiver
Side Keys
MOD Microcomputer IC3601
OR
④
Power MOD RELAY Control
Inv. Amp Q8751
KEY_1
KEY_2
TXD_MD
RXD_MD
REQ_MD
REM
RELAY2
①
③
SR_IN
IF Microcomputer IC6811
Inv. Amp Q4211
①
②
MAIN Microcomputer IC7003
TXD_IF
RXD_IF
CE_IF
REQ_IF
BUSY_IF
Inv. Amp Q6812
SR_OUT
SR OUT Jack JA7871

① : The remote control (or KEY) signal is input to the IF microcomputer.
② : The IF microcomputer sends the operation data of the remote control unit (or KEY) to the main microcomputer.
③ : The main microcomputer issues a startup command (PON) to the MOD microcomputer.
④ : The relay is controlled with logical OR interpretation of control signals by the main microcomputer and module (MOD) microcomputer.

[3] DETAILS OF POWER ON SEQUENCE

AC-OFF Main Power OFF, Passive Standby

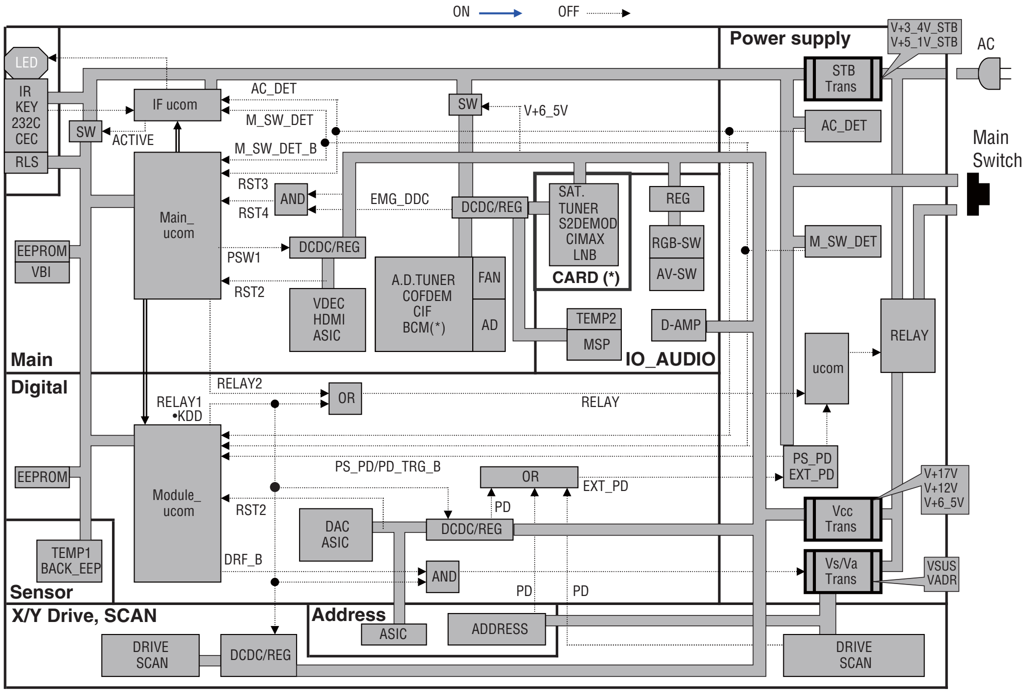
Front LED: OFF

Microcomputer
output port setting

IF: ACTIVE	OFF
Main: RELAY2	OFF
Main: PSW1	OFF
Module: RELAY1•KDD	OFF
Module: DRF_B	OFF

Microcomputer
input port state

Main: RST4	OFF
Main: RST2	OFF
Module: RST2	OFF


ON
OFF
Power supply
V+3_4V_STB
V+5_1V_STB
AC
STB Trans
AC_DET
Main Switch
M_SW_DET
RELAY
ucom
PS_PD
EXT_PD
V+17V
V+12V
V+6_5V
Vcc Trans
Vs/Va Trans
VSUS
VADR
DRIVE SCAN
LED
IR
KEY
232C
CEC
RLS
SW
ACTIVE
IF ucom
AC_DET
M_SW_DET
M_SW_DET_B
RST3
RST4
AND
Main_ ucom
EEPROM
VBI
PSW1
DCDC/REG
RST2
VDEC
HDMI
ASIC
EMG_DDC
SW
V+6_5V
DCDC/REG
A.D.TUNER
COFDEM
CIF
BCM(*)
FAN
AD
SAT.
TUNER
S2DEMOD
CIMAX
LNB
CARD (*)
REG
RGB-SW
AV-SW
TEMP2
MSP
D-AMP
IO_AUDIO
Main
Digital
RELAY2
RELAY1 •KDD
OR
RELAY
EEPROM
Module_ ucom
PS_PD/PD_TRG_B
OR
EXT_PD
PD
RST2
DAC ASIC
DCDC/REG
DRF_B
AND
PD
PD
TEMP1
BACK_EEP
Sensor
X/Y Drive, SCAN
Address
ASIC
ADDRESS
DRIVE SCAN
DCDC/REG

All devices are not electrified.
(*): PDP-LX5090H only

AC-ON Main Power OFF, Passive Standby

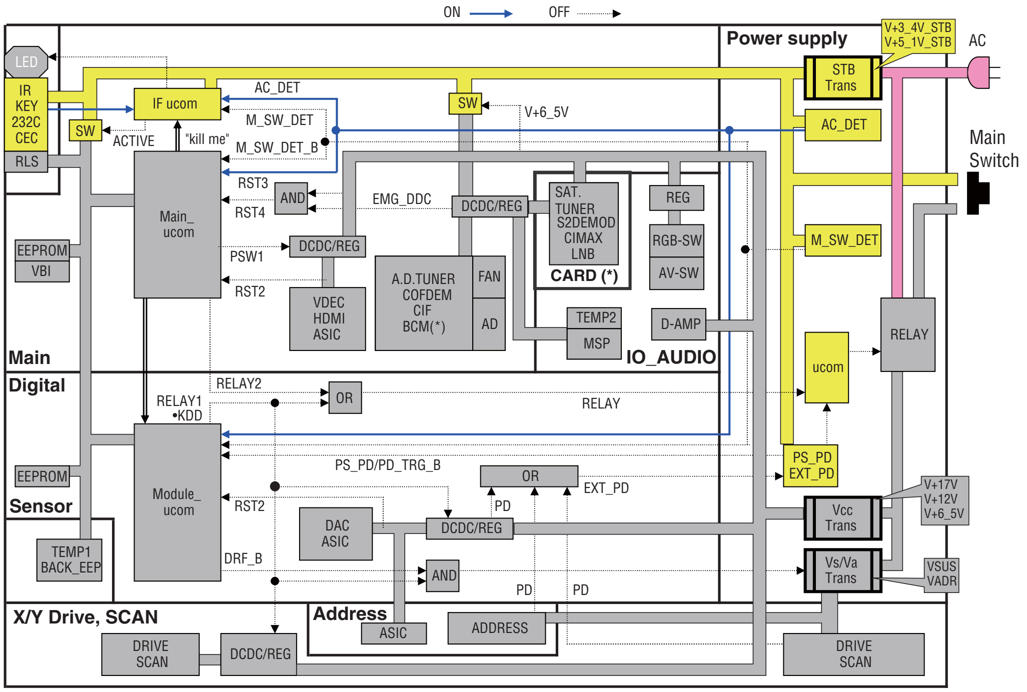
Front LED: OFF

Microcomputer
output port setting

IF: ACTIVE	OFF
Main: RELAY2	OFF
Main: PSW1	OFF
Module: RELAY1•KDD	OFF
Module: DRF_B	OFF

Microcomputer
input port state

Main: RST4	OFF
Main: RST2	OFF
Module: RST2	OFF


ON
OFF
Power supply
V+3_4V_STB
V+5_1V_STB
AC
STB Trans
AC_DET
Main Switch
M_SW_DET
RELAY
ucom
PS_PD
EXT_PD
V+17V
V+12V
V+6_5V
Vcc Trans
Vs/Va Trans
VSUS
VADR
DRIVE SCAN
LED
IR
KEY
232C
CEC
RLS
SW
ACTIVE
IF ucom
"kill me"
AC_DET
M_SW_DET
M_SW_DET_B
RST3
RST4
AND
Main_ ucom
EEPROM
VBI
PSW1
DCDC/REG
RST2
VDEC
HDMI
ASIC
EMG_DDC
SW
V+6_5V
DCDC/REG
A.D.TUNER
COFDEM
CIF
BCM(*)
FAN
AD
SAT.
TUNER
S2DEMOD
CIMAX
LNB
CARD (*)
REG
RGB-SW
AV-SW
TEMP2
MSP
D-AMP
IO_AUDIO
Main
Digital
RELAY2
RELAY1 •KDD
OR
RELAY
EEPROM
Module_ ucom
PS_PD/PD_TRG_B
OR
EXT_PD
PD
RST2
DAC ASIC
DCDC/REG
DRF_B
AND
PD
PD
TEMP1
BACK_EEP
Sensor
X/Y Drive, SCAN
Address
ASIC
ADDRESS
DRIVE SCAN
DCDC/REG

Only the periphery of the IF microcomputer are electrified.
The user operation is invalid due to Main Switch off.
(*): PDP-LX5090H only

AC-ON Main Power OFF, Active Standby

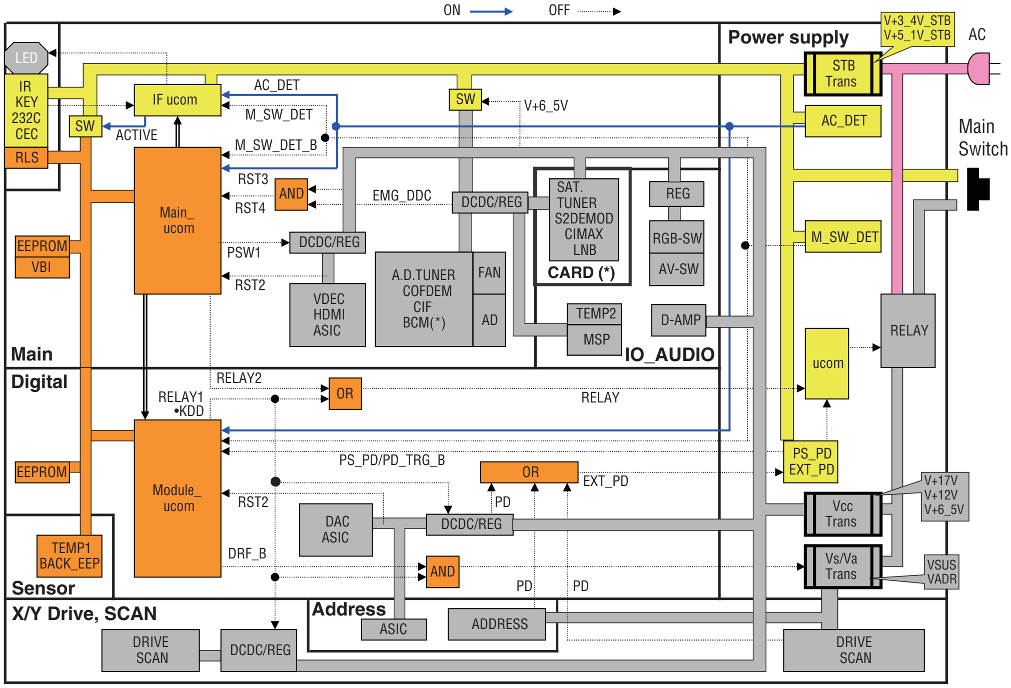
Front LED: OFF

Microcomputer
output port setting

IF: ACTIVE	ON
Main: RELAY2	OFF
Main: PSW1	OFF
Module: RELAY1•KDD	OFF
Module: DRF_B	OFF

Microcomputer
input port state

Main: RST4	OFF
Main: RST2	OFF
Module: RST2	OFF


ON
OFF
Power supply
V+3_4V_STB
V+5_1V_STB
AC
STB Trans
AC_DET
Main Switch
M_SW_DET
RELAY
ucom
PS_PD EXT_PD
V+17V V+12V V+6_5V
Vcc Trans
Vs/Va Trans
VSUS VADR
DRIVE SCAN
LED
IR KEY 232C CEC
RLS
SW
IF ucom
AC_DET
M_SW_DET
ACTIVE
M_SW_DET_B
SW
V+6_5V
Main_ ucom
RST3
RST4
AND
EMG_DDC
DCDC/REG
SAT. TUNER S2DEMOD CIMAX LNB
CARD (*)
REG
RGB-SW
AV-SW
EEPROM
VBI
PSW1
DCDC/REG
RST2
VDEC HDMI ASIC
A.D.TUNER COFDEM CIF BCM(*)
FAN
AD
TEMP2
MSP
D-AMP
Main
IO_AUDIO
Digital
RELAY2
OR
RELAY
RELAY1 •KDD
EEPROM
Module_ ucom
PS_PD/PD_TRG_B
OR
EXT_PD
PD
RST2
DAC ASIC
DCDC/REG
DRF_B
AND
PD
PD
TEMP1 BACK_EEP
Sensor
X/Y Drive, SCAN
Address
ASIC
ADDRESS
DRIVE SCAN
DCDC/REG

Periphery of the IF, Main and Module microcomputers are operated.
The user operation is invalid due to Main Switch off.
(*): PDP-LX5090H only

AC-ON Main Power ON, Passive Standby

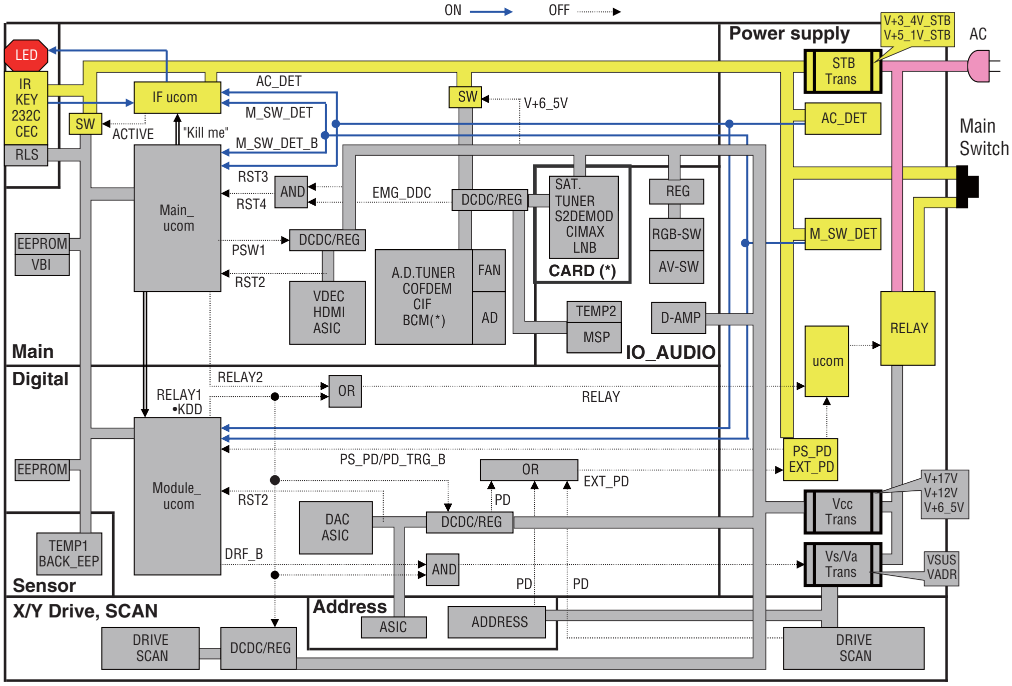
Front LED: RED

Microcomputer
output port setting

IF: ACTIVE	OFF
Main: RELAY2	OFF
Main: PSW1	OFF
Module: RELAY1•KDD	OFF
Module: DRF_B	OFF

Microcomputer
input port state

Main: RST4	OFF
Main: RST2	OFF
Module: RST2	OFF


ON
OFF
Power supply
V+3_4V_STB
V+5_1V_STB
AC
STB Trans
AC_DET
Main Switch
M_SW_DET
RELAY
ucom
PS_PD EXT_PD
V+17V V+12V V+6_5V
Vcc Trans
Vs/Va Trans
VSUS VADR
DRIVE SCAN
LED
IR KEY 232C CEC
RLS
SW
IF ucom
AC_DET
M_SW_DET
ACTIVE
"Kill me"
M_SW_DET_B
SW
V+6_5V
Main_ ucom
RST3
RST4
AND
EMG_DDC
DCDC/REG
SAT. TUNER S2DEMOD CIMAX LNB
CARD (*)
REG
RGB-SW
AV-SW
EEPROM
VBI
PSW1
DCDC/REG
RST2
VDEC HDMI ASIC
A.D.TUNER COFDEM CIF BCM(*)
FAN
AD
TEMP2
MSP
D-AMP
Main
IO_AUDIO
Digital
RELAY2
OR
RELAY
RELAY1 •KDD
EEPROM
Module_ ucom
PS_PD/PD_TRG_B
OR
EXT_PD
PD
RST2
DAC ASIC
DCDC/REG
DRF_B
AND
PD
PD
TEMP1 BACK_EEP
Sensor
X/Y Drive, SCAN
Address
ASIC
ADDRESS
DRIVE SCAN
DCDC/REG

Only the periphery of the IF microcomputer is electrified.
The user operation is valid.
(*): PDP-LX5090H only

AC-ON Main Power ON, Active Standby

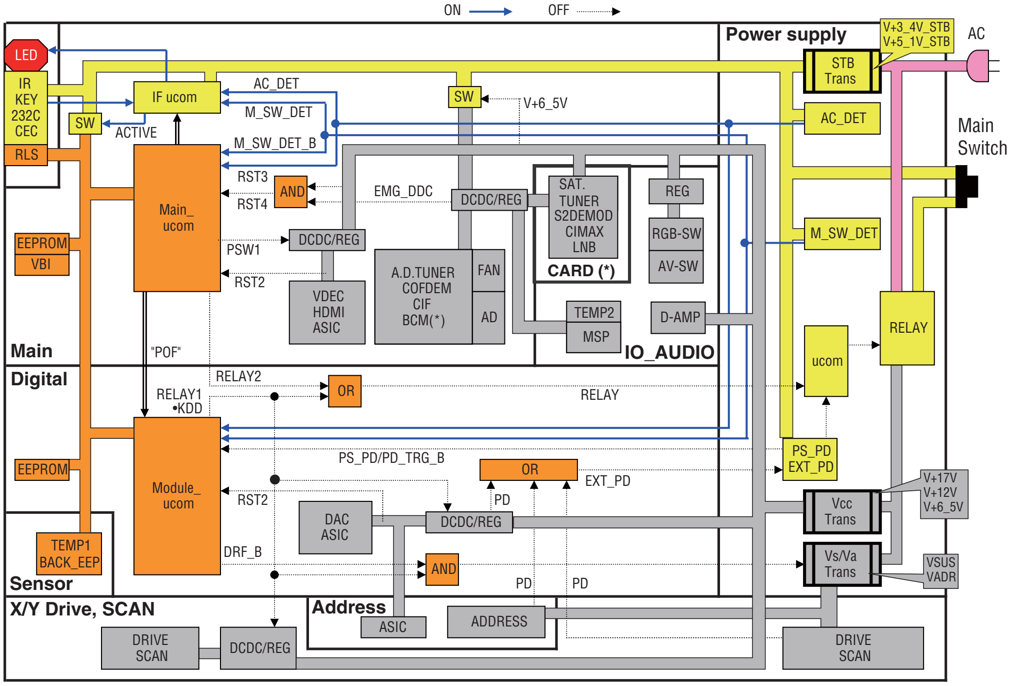
Front LED: RED

Microcomputer
output port setting

IF: ACTIVE	ON
Main: RELAY2	OFF
Main: PSW1	OFF
Module: RELAY1•KDD	OFF
Module: DRF_B	OFF

Microcomputer
input port state

Main: RST4	OFF
Main: RST2	OFF
Module: RST2	OFF


ON
OFF
Power supply
V+3_4V_STB
V+5_1V_STB
AC
STB Trans
AC_DET
Main Switch
M_SW_DET
RELAY
ucom
PS_PD
EXT_PD
Vcc Trans
Vs/Va Trans
V+17V
V+12V
V+6_5V
VSUS
VADR
LED
IR
KEY
232C
CEC
RLS
SW
IF ucom
ACTIVE
AC_DET
M_SW_DET
M_SW_DET_B
SW
V+6_5V
RST3
RST4
AND
EMG_DDC
DCDC/REG
PSW1
RST2
Main_ ucom
EEPROM
VBI
VDEC
HDMI
ASIC
A.D.TUNER
COFDEM
CIF
BCM(*)
FAN
AD
SAT. TUNER
S2DEMOD
CIMAX
LNB
CARD (*)
REG
RGB-SW
AV-SW
TEMP2
MSP
D-AMP
IO_AUDIO
Main
"POF"
Digital
RELAY2
OR
RELAY1 •KDD
RELAY
PS_PD/PD_TRG_B
OR
EXT_PD
EEPROM
Module_ ucom
RST2
PD
DAC ASIC
DCDC/REG
DRF_B
AND
PD
PD
TEMP1
BACK_EEP
Sensor
X/Y Drive, SCAN
DRIVE SCAN
DCDC/REG
Address
ASIC
ADDRESS
DRIVE SCAN

Periphery of the IF, Main and Module microcomputers are operated.
The user operation is valid.
(*): PDP-LX5090H only

AC-ON Main Power ON, Function Standby

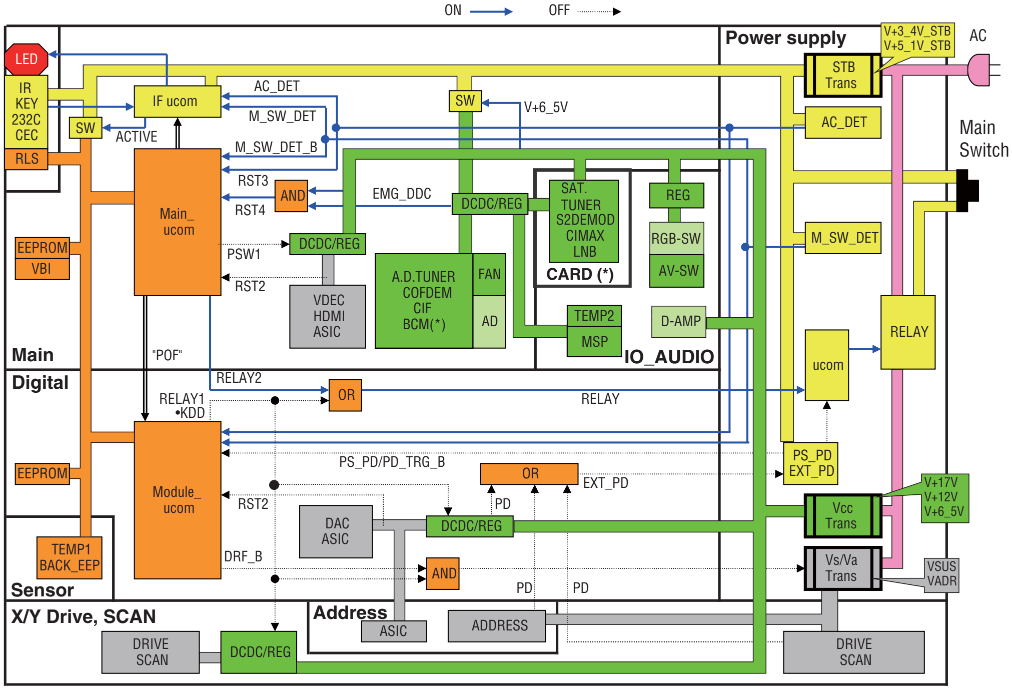
Front LED: RED

Microcomputer
output port setting

IF: ACTIVE	ON
Main: RELAY2	ON
Main: PSW1	OFF
Module: RELAY1•KDD	OFF
Module: DRF_B	OFF

Microcomputer
input port state

Main: RST4	ON
Main: RST2	OFF
Module: RST2	OFF


ON
OFF
Power supply
V+3_4V_STB
V+5_1V_STB
AC
STB Trans
AC_DET
Main Switch
M_SW_DET
RELAY
ucom
PS_PD
EXT_PD
Vcc Trans
Vs/Va Trans
V+17V
V+12V
V+6_5V
VSUS
VADR
LED
IR
KEY
232C
CEC
RLS
SW
IF ucom
ACTIVE
AC_DET
M_SW_DET
M_SW_DET_B
SW
V+6_5V
RST3
RST4
AND
EMG_DDC
DCDC/REG
PSW1
RST2
Main_ ucom
EEPROM
VBI
VDEC
HDMI
ASIC
A.D.TUNER
COFDEM
CIF
BCM(*)
FAN
AD
SAT. TUNER
S2DEMOD
CIMAX
LNB
CARD (*)
REG
RGB-SW
AV-SW
TEMP2
MSP
D-AMP
IO_AUDIO
Main
"POF"
Digital
RELAY2
OR
RELAY1 •KDD
RELAY
PS_PD/PD_TRG_B
OR
EXT_PD
EEPROM
Module_ ucom
RST2
PD
DAC ASIC
DCDC/REG
DRF_B
AND
PD
PD
TEMP1
BACK_EEP
Sensor
X/Y Drive, SCAN
DRIVE SCAN
DCDC/REG
Address
ASIC
ADDRESS
DRIVE SCAN

Standby power device and some Vcc power devices operate.
The user operation is valid.
RGB-SW/AD/D-AMP/MAP are electrified, but uses the power-saving mode function of the IC.
(*): PDP-LX5090H only

AC-ON Main Power ON, PDP Screen ON

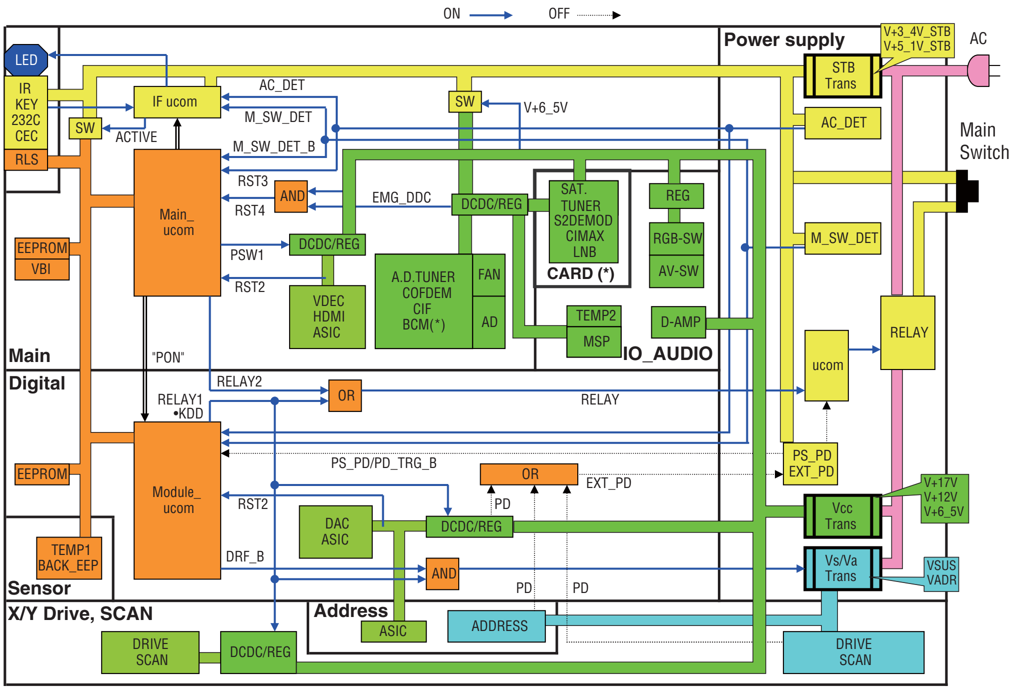
Front LED: BLUE

Microcomputer
output port setting

IF: ACTIVE	ON
Main: RELAY2	ON
Main: PSW1	ON
Module: RELAY1•KDD	ON
Module: DRF_B	ON

Microcomputer
input port state

Main: RST4	ON
Main: RST2	ON
Module: RST2	ON

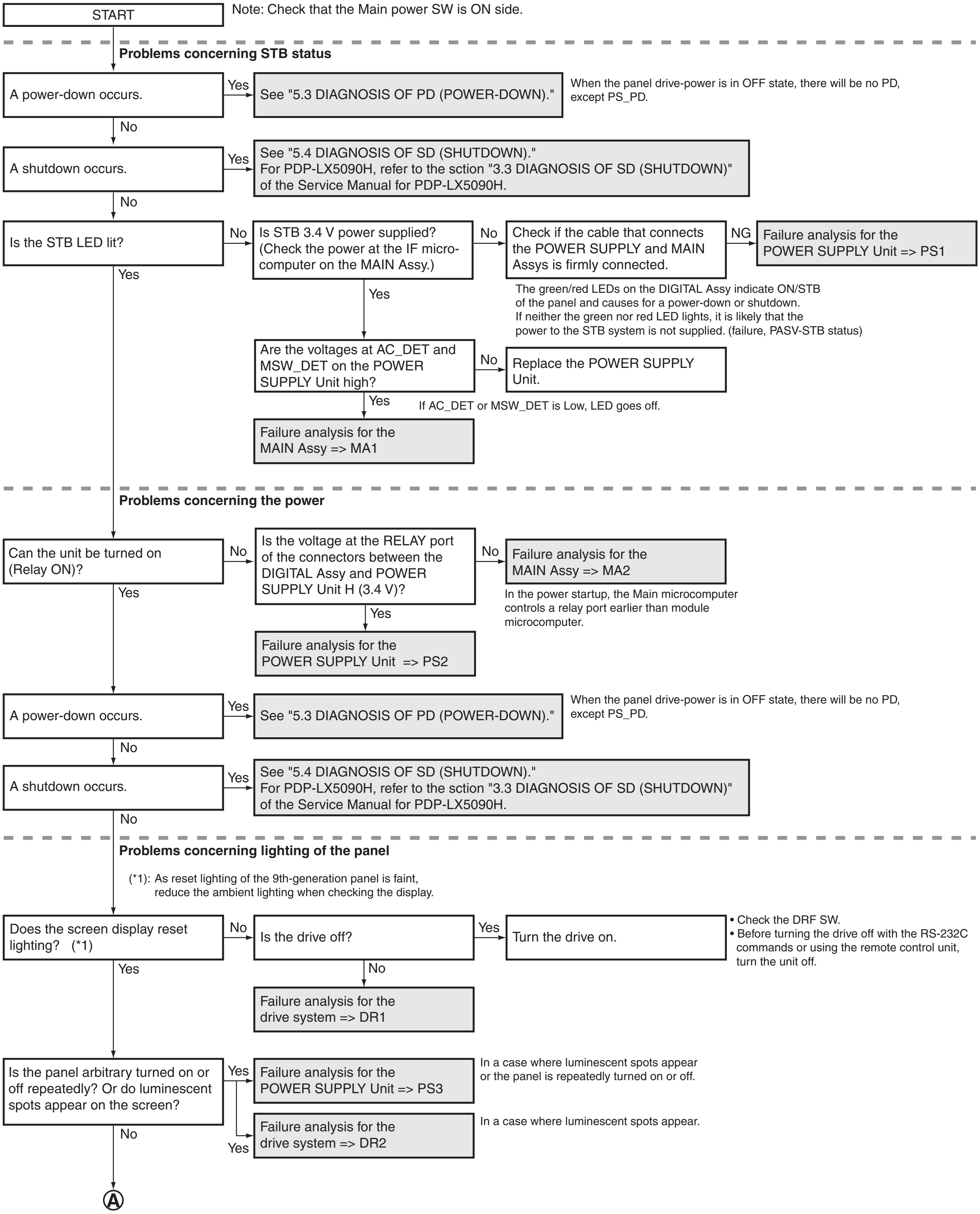

ON
OFF
Power supply
V+3_4V_STB
V+5_1V_STB
AC
STB Trans
AC_DET
Main Switch
M_SW_DET
RELAY
ucom
PS_PD
EXT_PD
Vcc Trans
V+17V
V+12V
V+6_5V
Vs/Va Trans
VSUS
VADR
LED
IR
KEY
232C
CEC
RLS
SW
ACTIVE
IF ucom
AC_DET
M_SW_DET
M_SW_DET_B
SW
V+6_5V
RST3
RST4
AND
EMG_DDC
DCDC/REG
Main_ ucom
EEPROM
VBI
PSW1
DCDC/REG
RST2
VDEC
HDMI
ASIC
A.D.TUNER
COFDEM
CIF
BCM(*)
FAN
AD
SAT.
TUNER
S2DEMOD
CIMAX
LNB
CARD (*)
REG
RGB-SW
AV-SW
TEMP2
MSP
D-AMP
IO_AUDIO
Main
"PON"
Digital
RELAY2
OR
RELAY
RELAY1
•KDD
EEPROM
PS_PD/PD_TRG_B
OR
EXT_PD
Module_ ucom
RST2
PD
DAC
ASIC
DCDC/REG
DRF_B
AND
PD
PD
TEMP1
BACK_EEP
Sensor
X/Y Drive, SCAN
DRIVE SCAN
DCDC/REG
Address
ASIC
ADDRESS
DRIVE SCAN

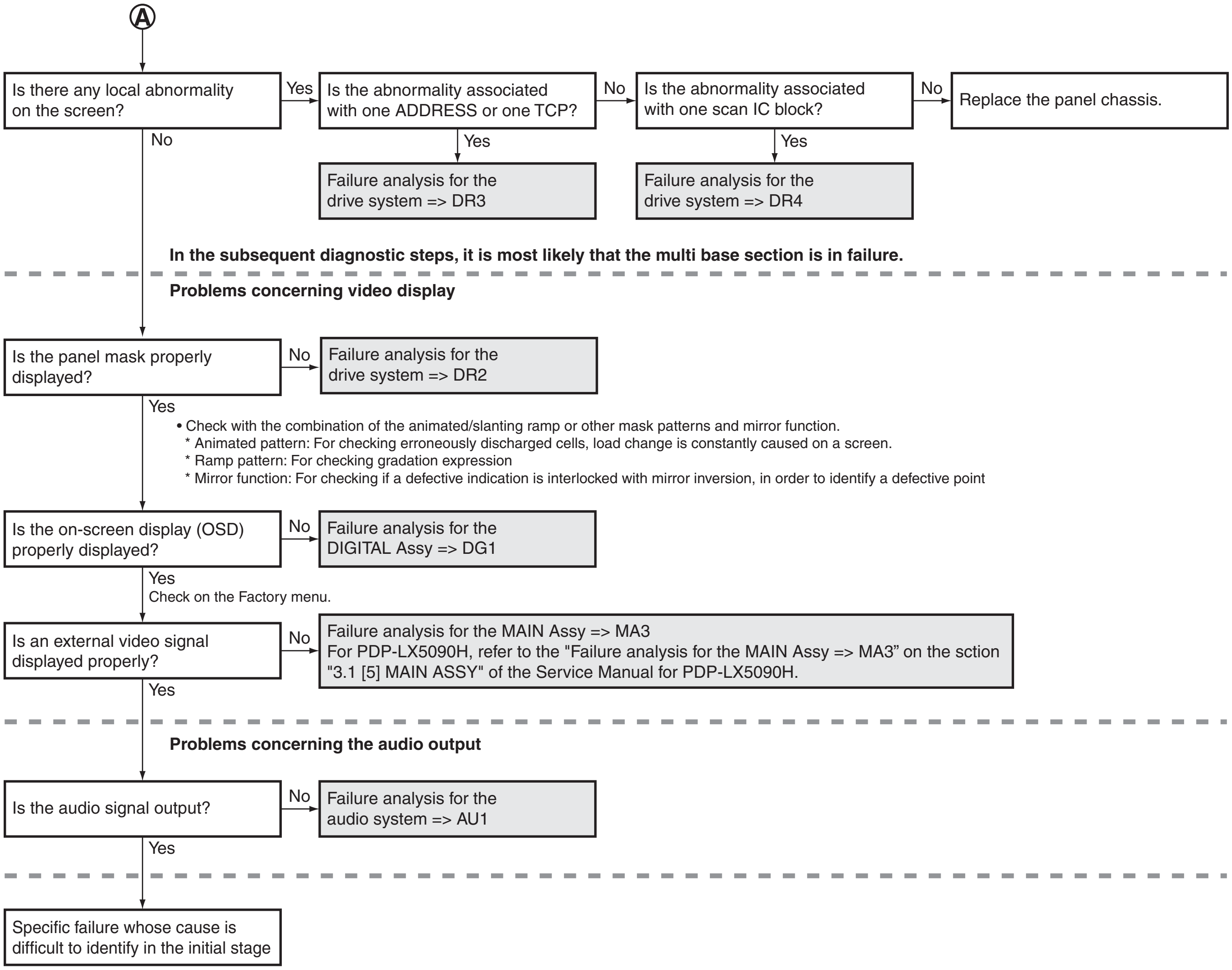
All devices are operated.
(*): PDP-LX5090H only

5.2 DIAGNOSIS FLOWCHART OF FAILURE ANALYSIS

[1] WHOLE UNIT

Flowchart of Failure Analysis for The Whole Unit


START
Note: Check that the Main power SW is ON side.
Problems concerning STB status
A power-down occurs.
Yes
See "5.3 DIAGNOSIS OF PD (POWER-DOWN)."
When the panel drive-power is in OFF state, there will be no PD, except PS_PD.
No
A shutdown occurs.
Yes
See "5.4 DIAGNOSIS OF SD (SHUTDOWN)." For PDP-LX5090H, refer to the sction "3.3 DIAGNOSIS OF SD (SHUTDOWN)" of the Service Manual for PDP-LX5090H.
No
Is the STB LED lit?
No
Is STB 3.4 V power supplied? (Check the power at the IF micro-computer on the MAIN Assy.)
No
Check if the cable that connects the POWER SUPPLY and MAIN Assys is firmly connected.
NG
Failure analysis for the POWER SUPPLY Unit => PS1
The green/red LEDs on the DIGITAL Assy indicate ON/STB of the panel and causes for a power-down or shutdown. If neither the green nor red LED lights, it is likely that the power to the STB system is not supplied. (failure, PASV-STB status)
Yes
Are the voltages at AC_DET and MSW_DET on the POWER SUPPLY Unit high?
No
Replace the POWER SUPPLY Unit.
Yes
If AC_DET or MSW_DET is Low, LED goes off.
Failure analysis for the MAIN Assy => MA1
Yes
Problems concerning the power
Can the unit be turned on (Relay ON)?
No
Is the voltage at the RELAY port of the connectors between the DIGITAL Assy and POWER SUPPLY Unit H (3.4 V)?
No
Failure analysis for the MAIN Assy => MA2
In the power startup, the Main microcomputer controls a relay port earlier than module microcomputer.
Yes
Failure analysis for the POWER SUPPLY Unit => PS2
Yes
A power-down occurs.
Yes
See "5.3 DIAGNOSIS OF PD (POWER-DOWN)."
When the panel drive-power is in OFF state, there will be no PD, except PS_PD.
No
A shutdown occurs.
Yes
See "5.4 DIAGNOSIS OF SD (SHUTDOWN)." For PDP-LX5090H, refer to the sction "3.3 DIAGNOSIS OF SD (SHUTDOWN)" of the Service Manual for PDP-LX5090H.
No
Problems concerning lighting of the panel
(*1): As reset lighting of the 9th-generation panel is faint, reduce the ambient lighting when checking the display.
Does the screen display reset lighting? (*1)
No
Is the drive off?
Yes
Turn the drive on.
• Check the DRF SW.
• Before turning the drive off with the RS-232C commands or using the remote control unit, turn the unit off.
No
Failure analysis for the drive system => DR1
Yes
Is the panel arbitrary turned on or off repeatedly? Or do luminescent spots appear on the screen?
Yes
Failure analysis for the POWER SUPPLY Unit => PS3
In a case where luminescent spots appear or the panel is repeatedly turned on or off.
Yes
Failure analysis for the drive system => DR2
In a case where luminescent spots appear.
No
A


A
Is there any local abnormality on the screen?
Yes
Is the abnormality associated with one ADDRESS or one TCP?
No
Is the abnormality associated with one scan IC block?
No
Replace the panel chassis.
Yes
Failure analysis for the drive system => DR3
Yes
Failure analysis for the drive system => DR4
No
Is the panel mask properly displayed?
No
Failure analysis for the drive system => DR2
Yes
Is the on-screen display (OSD) properly displayed?
No
Failure analysis for the DIGITAL Assy => DG1
Yes
Is an external video signal displayed properly?
No
Failure analysis for the MAIN Assy => MA3
For PDP-LX5090H, refer to the "Failure analysis for the MAIN Assy => MA3” on the sction "3.1 [5] MAIN ASSY" of the Service Manual for PDP-LX5090H.
Yes
Is the audio signal output?
No
Failure analysis for the audio system => AU1
Yes
Specific failure whose cause is difficult to identify in the initial stage

In the subsequent diagnostic steps, it is most likely that the multi base section is in failure.

Problems concerning video display

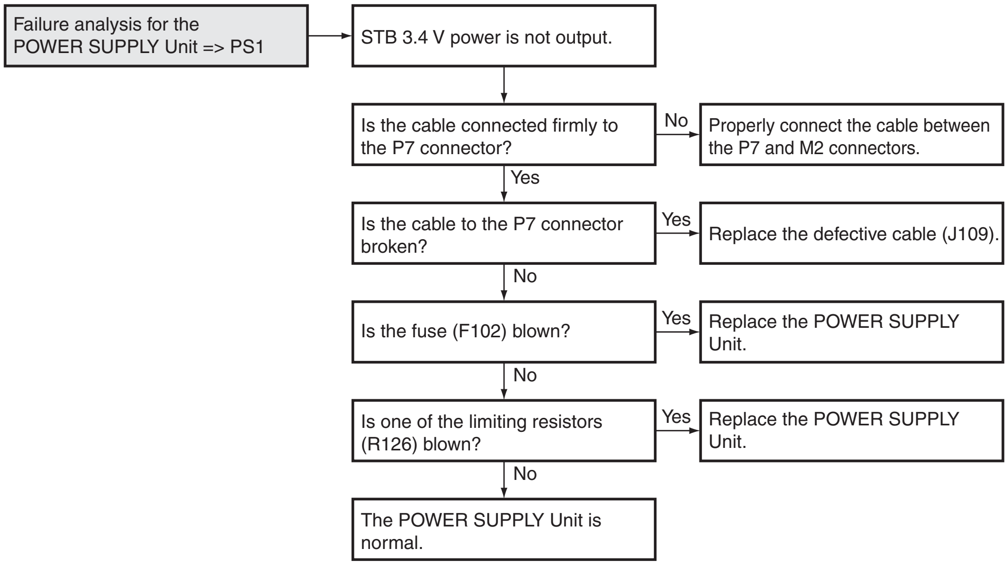
- Check with the combination of the animated/slanting ramp or other mask patterns and mirror function.
  - * Animated pattern: For checking erroneously discharged cells, load change is constantly caused on a screen.
  - * Ramp pattern: For checking gradation expression
  - * Mirror function: For checking if a defective indication is interlocked with mirror inversion, in order to identify a defective point

Check on the Factory menu.

Problems concerning the audio output

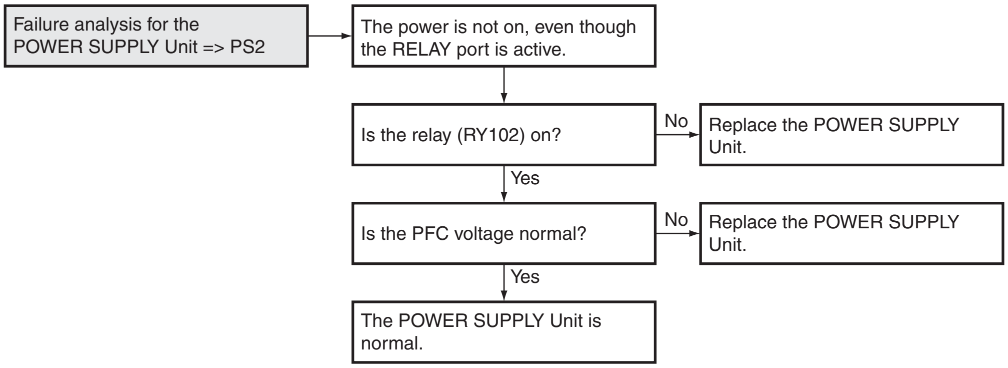
[2] POWER SUPPLY UNIT

Flowchart of Failure Analysis for The POWER SUPPLY Unit


Failure analysis for the POWER SUPPLY Unit => PS1
STB 3.4 V power is not output.
Is the cable connected firmly to the P7 connector?
No
Properly connect the cable between the P7 and M2 connectors.
Yes
Is the cable to the P7 connector broken?
Yes
Replace the defective cable (J109).
No
Is the fuse (F102) blown?
Yes
Replace the POWER SUPPLY Unit.
No
Is one of the limiting resistors (R126) blown?
Yes
Replace the POWER SUPPLY Unit.
No
The POWER SUPPLY Unit is normal.

Check the voltage at the MAIN Assy and POWER SUPPLY Unit.

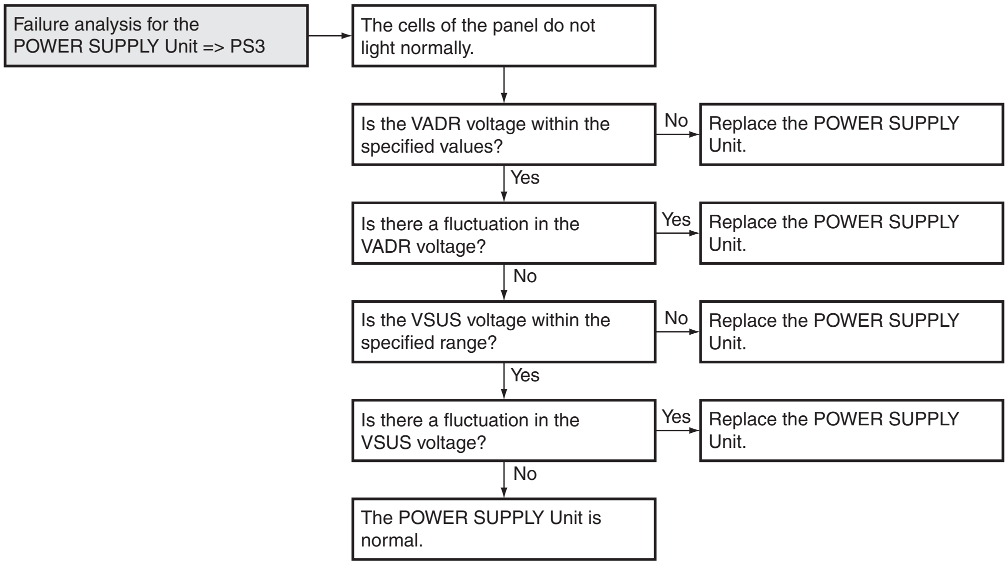
Check the resistance between D112 cathode and JW194 (jumper), using a tester.


Failure analysis for the POWER SUPPLY Unit => PS2
The power is not on, even though the RELAY port is active.
Is the relay (RY102) on?
No
Replace the POWER SUPPLY Unit.
Yes
Is the PFC voltage normal?
No
Replace the POWER SUPPLY Unit.
Yes
The POWER SUPPLY Unit is normal.

- Check the relay operation at the JW281 (jumper). (Voltage: 5 V)
- Check the relay sound (click).

- Check the voltage between the JW154 (jumper) (-) and JW139 (jumper) (+).
- The voltage must be around 400 V. (340V or less are defective.)

Caution: High voltage!


Failure analysis for the POWER SUPPLY Unit => PS3
The cells of the panel do not light normally.
Is the VADR voltage within the specified values?
No
Replace the POWER SUPPLY Unit.
Yes
Is there a fluctuation in the VADR voltage?
Yes
Replace the POWER SUPPLY Unit.
No
Is the VSUS voltage within the specified range?
No
Replace the POWER SUPPLY Unit.
Yes
Is there a fluctuation in the VSUS voltage?
Yes
Replace the POWER SUPPLY Unit.
No
The POWER SUPPLY Unit is normal.

The specified voltage values are between 72 and 78 V.

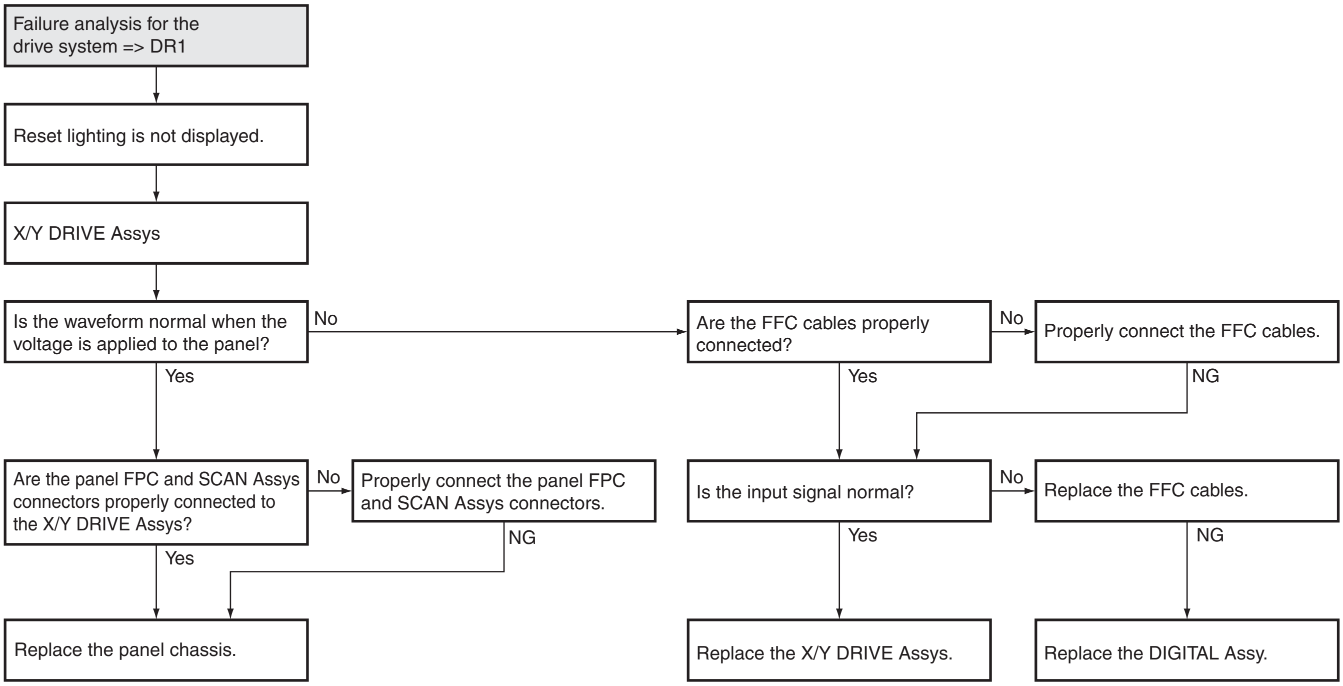
The ripple must be within 5 V.

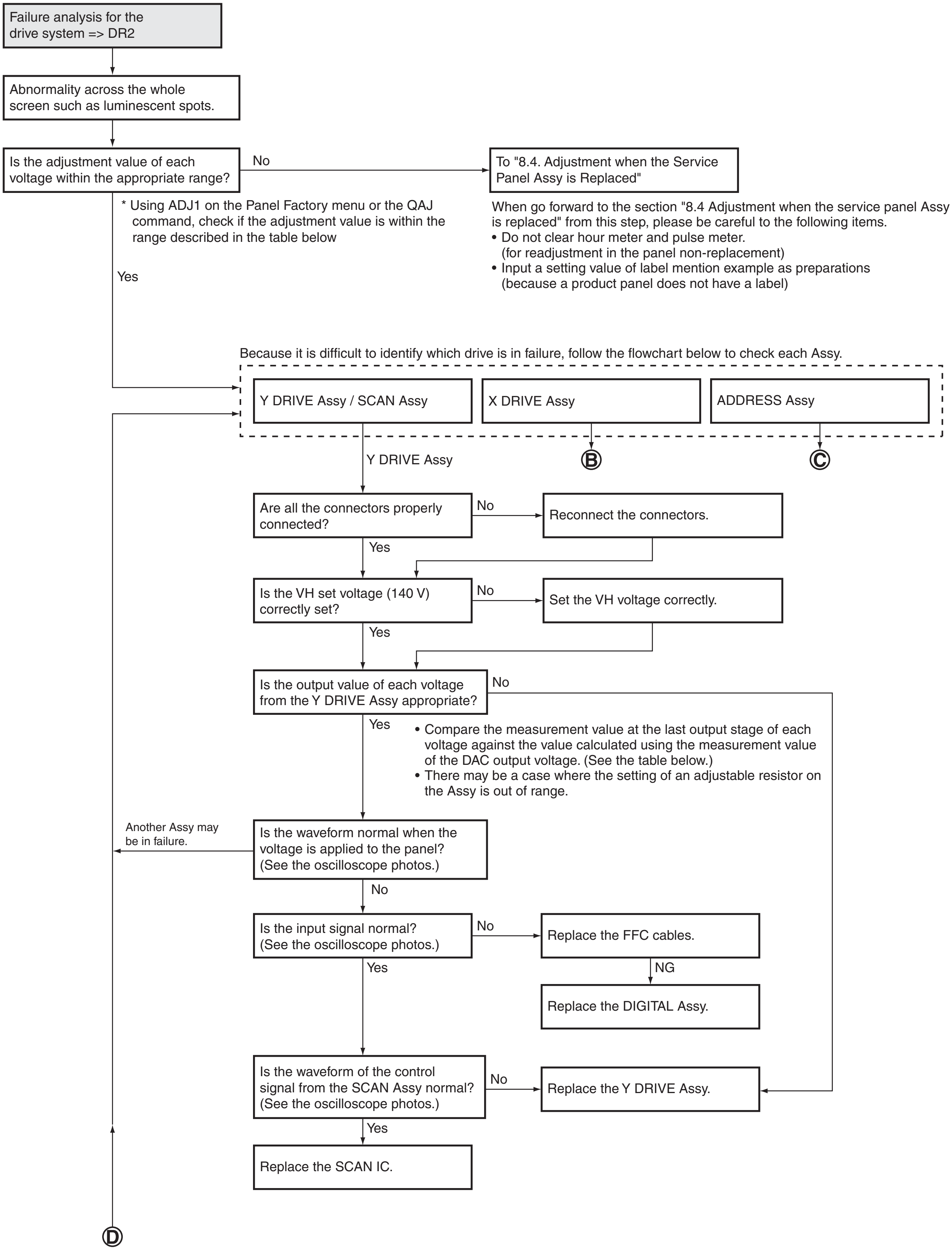
The specified voltage values are between 200 and 210 V (VSU: 125/35°C).

The ripple must be within 10 V.

[3] DRIVE ASSY

Flowchart of Failure Analysis for The Drive Assy


Failure analysis for the drive system => DR1
Reset lighting is not displayed.
X/Y DRIVE Assys
Is the waveform normal when the voltage is applied to the panel?
No
Yes
Are the FFC cables properly connected?
No
Properly connect the FFC cables.
Yes
NG
Are the panel FPC and SCAN Assys connectors properly connected to the X/Y DRIVE Assys?
No
Properly connect the panel FPC and SCAN Assys connectors.
Yes
NG
Is the input signal normal?
No
Replace the FFC cables.
Yes
NG
Replace the panel chassis.
Replace the X/Y DRIVE Assys.
Replace the DIGITAL Assy.

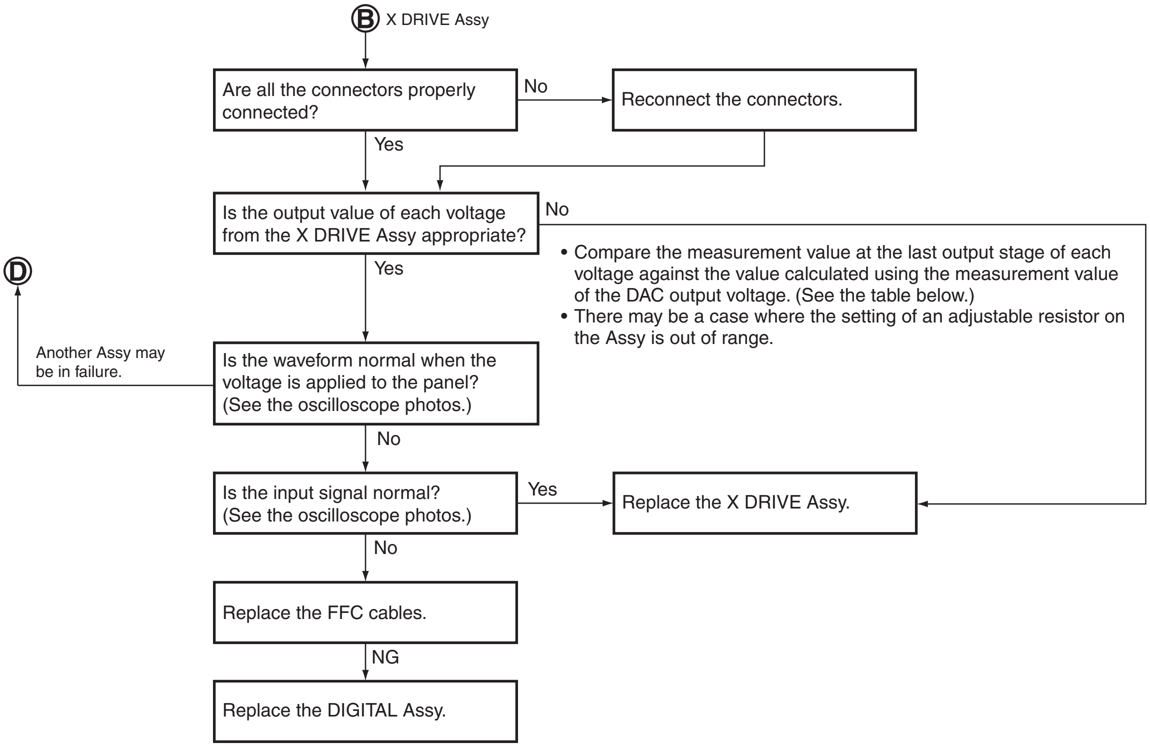

Failure analysis for the drive system => DR2
Abnormality across the whole screen such as luminescent spots.
Is the adjustment value of each voltage within the appropriate range?
No
To "8.4. Adjustment when the Service Panel Assy is Replaced"
Yes
Y DRIVE Assy / SCAN Assy
X DRIVE Assy
ADDRESS Assy
Y DRIVE Assy
Ⓑ
Ⓒ
Are all the connectors properly connected?
No
Reconnect the connectors.
Yes
Is the VH set voltage (140 V) correctly set?
No
Set the VH voltage correctly.
Yes
Is the output value of each voltage from the Y DRIVE Assy appropriate?
No
Yes
Another Assy may be in failure.
Is the waveform normal when the voltage is applied to the panel? (See the oscilloscope photos.)
No
Is the input signal normal? (See the oscilloscope photos.)
No
Replace the FFC cables.
NG
Replace the DIGITAL Assy.
Yes
Is the waveform of the control signal from the SCAN Assy normal? (See the oscilloscope photos.)
No
Replace the Y DRIVE Assy.
Yes
Replace the SCAN IC.
Ⓓ

* Using ADJ1 on the Panel Factory menu or the QAJ command, check if the adjustment value is within the range described in the table below

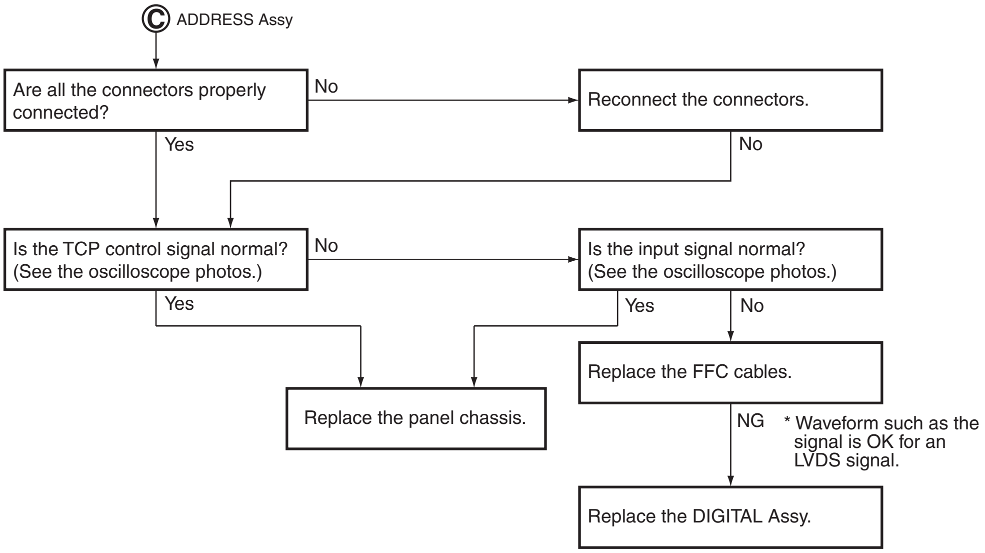
When go forward to the section "8.4 Adjustment when the service panel Assy is replaced" from this step, please be careful to the following items.
- Do not clear hour meter and pulse meter. (for readjustment in the panel non-replacement)
- Input a setting value of label mention example as preparations (because a product panel does not have a label)

Because it is difficult to identify which drive is in failure, follow the flowchart below to check each Assy.

- Compare the measurement value at the last output stage of each voltage against the value calculated using the measurement value of the DAC output voltage. (See the table below.)
- There may be a case where the setting of an adjustable resistor on the Assy is out of range.


B X DRIVE Assy
Are all the connectors properly connected?
No
Reconnect the connectors.
Yes
Is the output value of each voltage from the X DRIVE Assy appropriate?
No
Yes
D
Another Assy may be in failure.
Is the waveform normal when the voltage is applied to the panel? (See the oscilloscope photos.)
No
Is the input signal normal? (See the oscilloscope photos.)
Yes
Replace the X DRIVE Assy.
No
Replace the FFC cables.
NG
Replace the DIGITAL Assy.

- Compare the measurement value at the last output stage of each voltage against the value calculated using the measurement value of the DAC output voltage. (See the table below.)
- There may be a case where the setting of an adjustable resistor on the Assy is out of range.

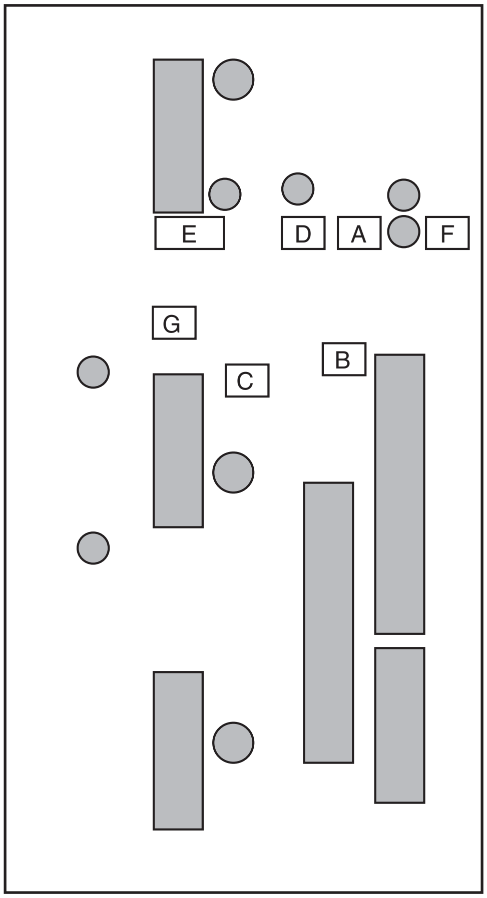

C ADDRESS Assy
Are all the connectors properly connected?
No
Reconnect the connectors.
Yes
No
Is the TCP control signal normal? (See the oscilloscope photos.)
No
Is the input signal normal? (See the oscilloscope photos.)
Yes
Yes
No
Replace the panel chassis.
Replace the FFC cables.
NG
Replace the DIGITAL Assy.

* Waveform such as the signal is OK for an LVDS signal.

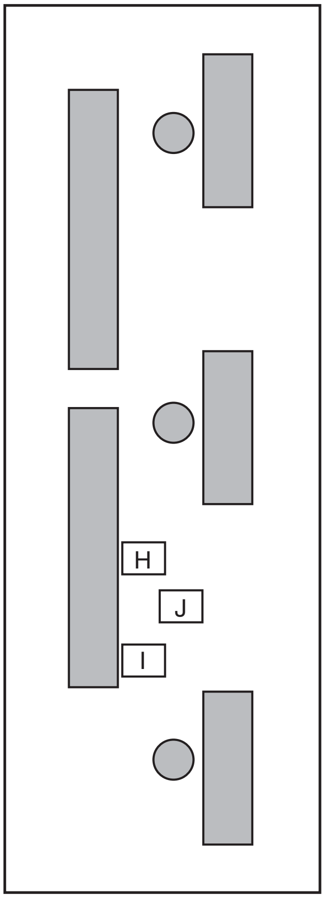
Assy Name	Voltage to be Checked (V)	Adjustable Range		Measurement Point		Computation Formula for Voltage (Absolute Value)	
		60-inch	50-inch	Output at the Last Stage	DAC Output (*2)	Computation Using DAC Output Voltage (V)	Computation Using Adjustment Value (*4)
Y DRIVE Assy	VSNOFS	040 to 085	101 to 157	CN2404 (*1)	Lower side of R2723 (*3)	VOFS_ADJ × 13.91 + 55.54	VOF value × 0.18 + 9.6
	VYRST	001 to 056	001 to 074	CN2401 (*1)	Upper side of R2621 (*3)	VYPRST_ADJ × 62.495 + 75.2	VRP value × 0.81 + 74.4
	VKNOFS1_2	054 to 107	121 to 164	CN2405 (*1)	Left side of R2754 (*3)	YVKNOFS1_ADJ × 36.85 + 159.3	(V1F value+VYF value-128) × 0.48 + 158.8
	VKNOFS3	065 to 117	107 to 149	CN2403 (*1)	Right side of R2757 (*3)	YVKNOFS3_ADJ × 36.85 + 159.3	(V3F value+VYF value-128) × 0.48 + 158.8
	VKNOFS4	111 to 164	151 to 193	CN2406 (*1)	Right side of R2755 (*3)	YVKNOFS4_ADJ × 36.85 + 159.3	(V4F value+VYF value-128) × 0.48 + 158.8
X DRIVE Assy	XKOFS1	105	085	CN1302 (*1)	K1402 (*1)	XKNOFS1_ADJ × 27.3 + 30	VX1 value × 0.35 + 29.7
	XKOFS2	063	047	CN1301 (*1)	K1401 (*1)	XKNOFS2_ADJ × 25.0 + 69.8	VX2 value × 0.32 + 69.5

(*1): These parts have not been mounted.
(*2): It is recommended to measure the DAC output voltage with the drive off.
(*3): View when the Assy is mounted on the unit and viewed from the rear.
(*4): The value calculated using an adjustment value may be different from the value measured at the last output stage, because various corrections such as temperature correction are not taken into consideration.

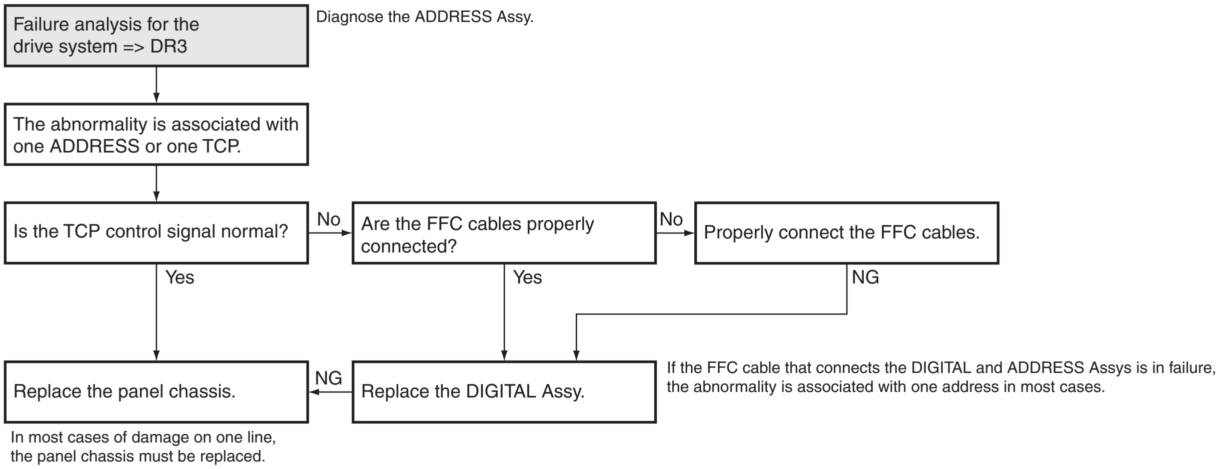
Diagrammatic view of the Y DRIVE Assy

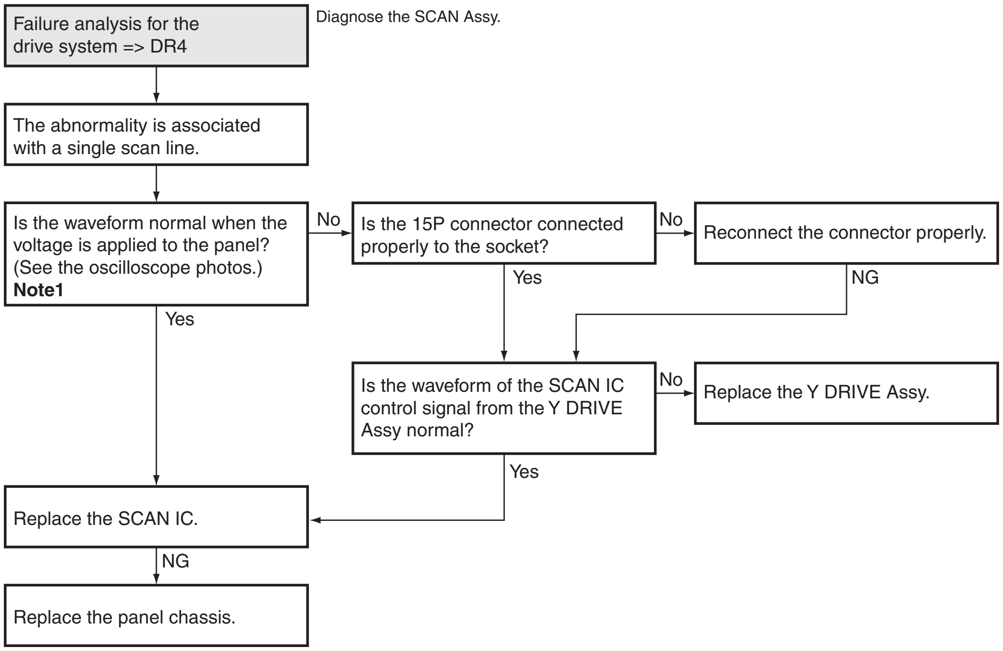


Diagrammatic view of the X DRIVE Assy



A	R2754,R2755,R2757
B	R2723
C	R2621
D	CN2405
E	CN2403,CN2406
F	CN2404
G	CN2401
H	K1401
I	K1402
J	CN1301,CN1302


Failure analysis for the drive system => DR3
Diagnose the ADDRESS Assy.
The abnormality is associated with one ADDRESS or one TCP.
Is the TCP control signal normal?
No
Are the FFC cables properly connected?
No
Properly connect the FFC cables.
Yes
Yes
NG
Replace the panel chassis.
NG
Replace the DIGITAL Assy.
If the FFC cable that connects the DIGITAL and ADDRESS Assys is in failure, the abnormality is associated with one address in most cases.
In most cases of damage on one line, the panel chassis must be replaced.


Failure analysis for the drive system => DR4
Diagnose the SCAN Assy.
The abnormality is associated with a single scan line.
Is the waveform normal when the voltage is applied to the panel? (See the oscilloscope photos.) Note1
No
Is the 15P connector connected properly to the socket?
No
Reconnect the connector properly.
Yes
NG
Yes
Is the waveform of the SCAN IC control signal from the Y DRIVE Assy normal?
No
Replace the Y DRIVE Assy.
Yes
Replace the SCAN IC.
NG
Replace the panel chassis.

Note 1:
In a case where confirmation of the waveform for a particular line is impossible with an oscilloscope, it is possible to identify a defective line by lighting a particular line, using the following commands: (The SCAN IC outputting each line refers to the table.)

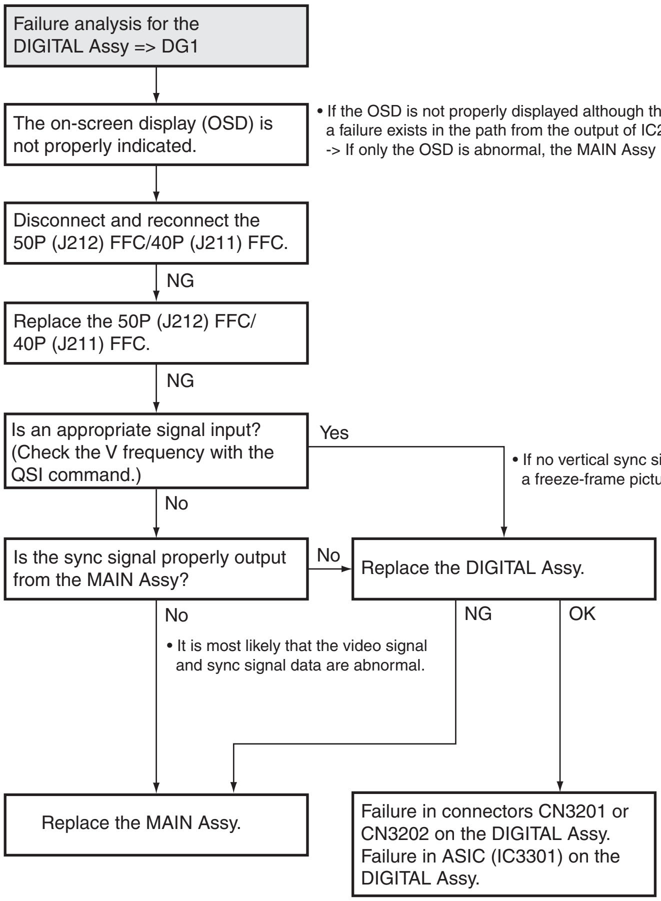
PON
FAY
MKRS01
BSMS01 (Command for reducing phosphor burn-in)
$250000**** (In place of ****, input a figure between 0001 and 1080, which denotes an ordinal number of a particular line.)

With the above commands, a particular line lights. Be careful to light a line for as short a time as possible, to avoid phosphor burn-in.
After a particular line is identified, display an all-white screen to protect the screen from burn-in.

IC No.	Line Number	Object Line
No 1	66	0001 to 0066
No 2	68	0067 to 0134
No 3	68	0135 to 0202
No 4	68	0203 to 0270
No 5	68	0271 to 0338
No 6	68	0339 to 0406
No 7	68	0407 to 0474
No 8	66	0475 to 0540
No 9	66	0541 to 0606
No 10	68	0607 to 0674
No 11	68	0675 to 0742
No 12	68	0743 to 0810
No 13	68	0811 to 0878
No 14	68	0879 to 0946
No 15	68	0947 to 1014
No 16	66	1015 to 1080

[4] DIGITAL ASSY

Flowchart of Failure Analysis for The DIGITAL Assy


Failure analysis for the DIGITAL Assy => DG1
The on-screen display (OSD) is not properly indicated.
Disconnect and reconnect the 50P (J212) FFC/40P (J211) FFC.
NG
Replace the 50P (J212) FFC/ 40P (J211) FFC.
NG
Is an appropriate signal input? (Check the V frequency with the QSI command.)
Yes
No
Is the sync signal properly output from the MAIN Assy?
No
Replace the DIGITAL Assy.
No
NG
OK
Replace the MAIN Assy.
Failure in connectors CN3201 or CN3202 on the DIGITAL Assy. Failure in ASIC (IC3301) on the DIGITAL Assy.

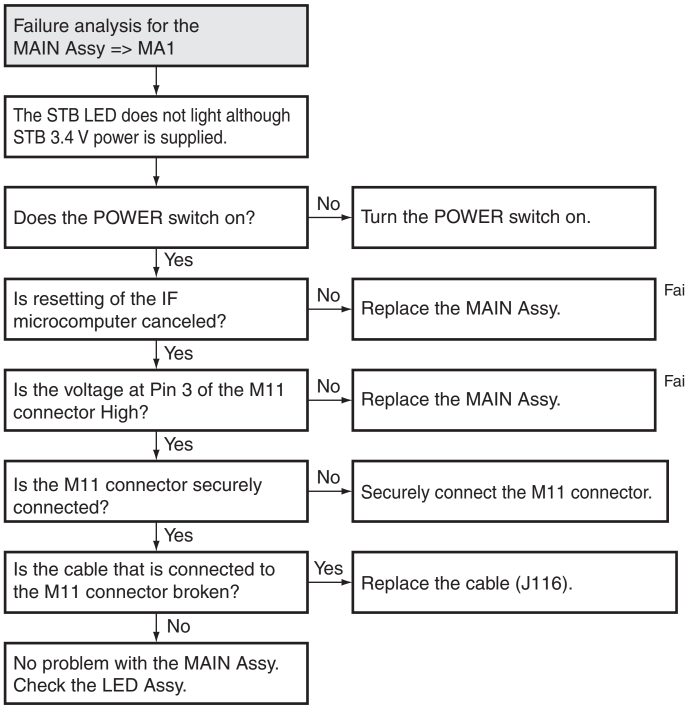
- If the OSD is not properly displayed although the panel mask is properly displayed, a failure exists in the path from the output of IC2801 on the MAIN Assy to IC3301 on the DIGITAL Assy. -> If only the OSD is abnormal, the MAIN Assy is in failure.

- If no vertical sync signal is input to the DIGITAL Assy, a freeze-frame picture will be displayed.

- It is most likely that the video signal and sync signal data are abnormal.

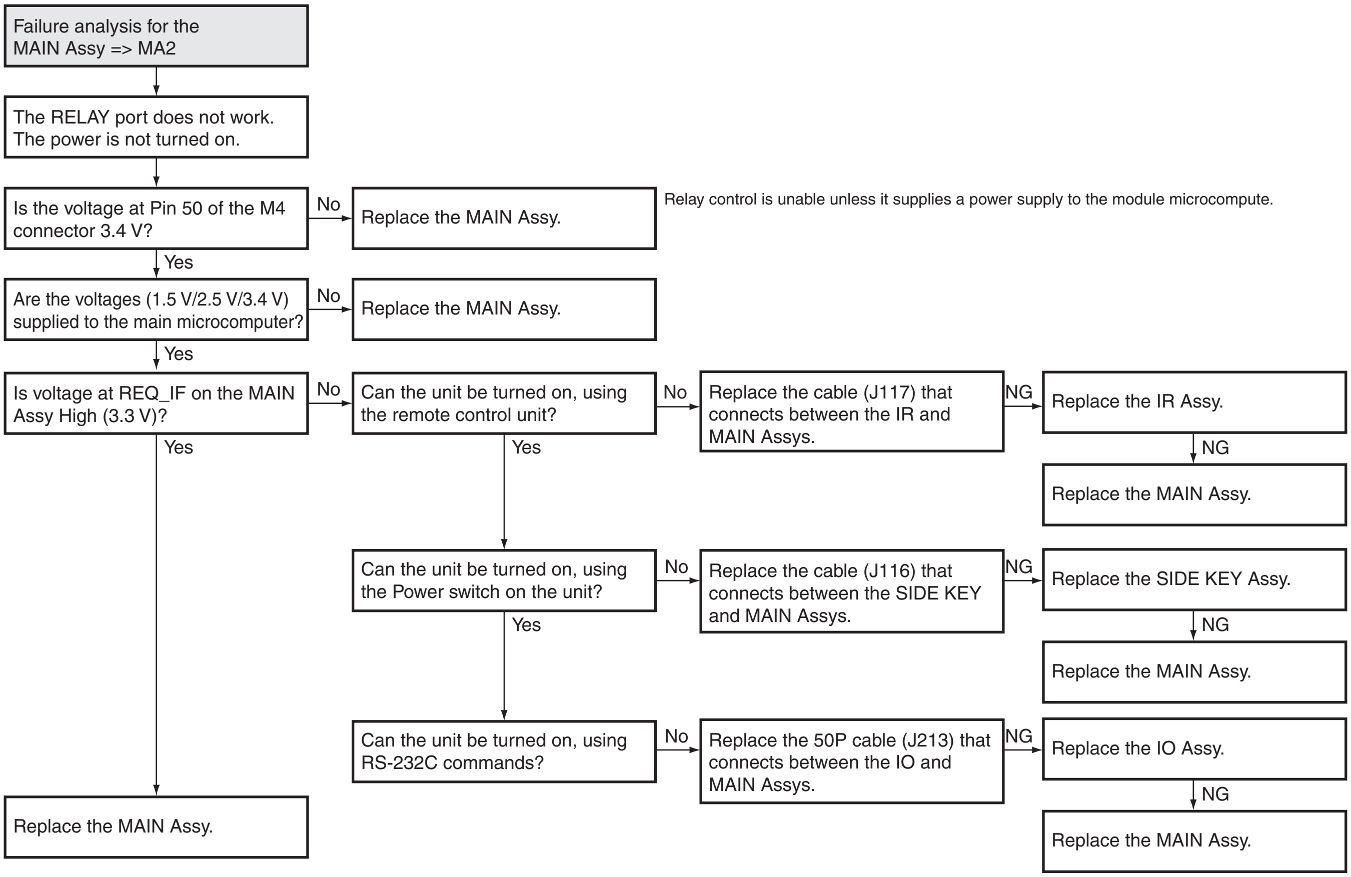
[5] MAIN ASSY

Flowchart of Failure Analysis for The MAIN Assy


Failure analysis for the MAIN Assy => MA1
The STB LED does not light although STB 3.4 V power is supplied.
Does the POWER switch on?
No
Turn the POWER switch on.
Yes
Is resetting of the IF microcomputer canceled?
No
Replace the MAIN Assy.
Yes
Is the voltage at Pin 3 of the M11 connector High?
No
Replace the MAIN Assy.
Yes
Is the M11 connector securely connected?
No
Securely connect the M11 connector.
Yes
Is the cable that is connected to the M11 connector broken?
Yes
Replace the cable (J116).
No
No problem with the MAIN Assy. Check the LED Assy.

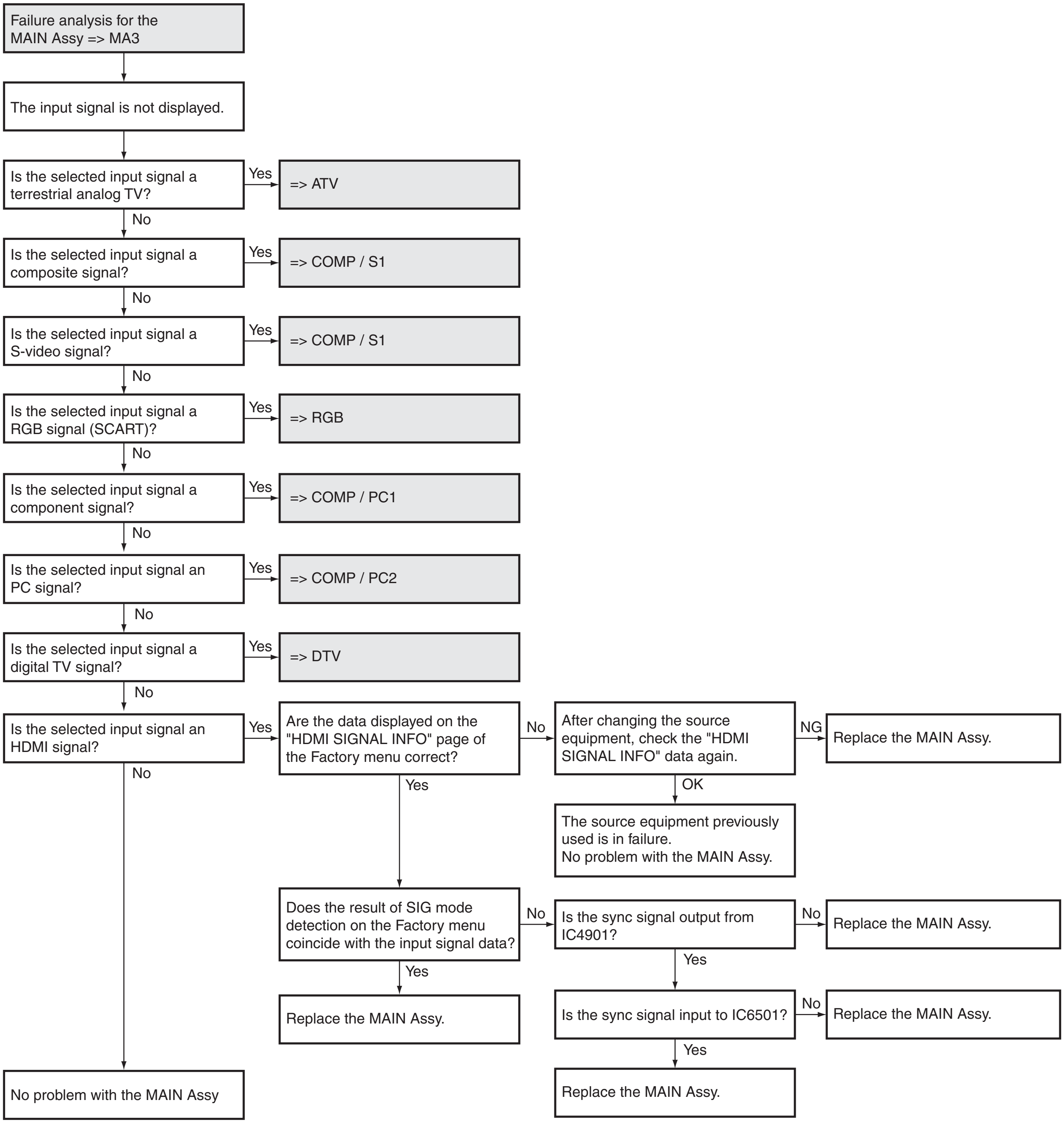
Failure in the RST IC (IC8302) output or its peripheral circuits

Failure in the line between the IF microcomputer and M11 connector


Failure analysis for the MAIN Assy => MA2
The RELAY port does not work. The power is not turned on.
Is the voltage at Pin 50 of the M4 connector 3.4 V?
No
Replace the MAIN Assy.
Yes
Are the voltages (1.5 V/2.5 V/3.4 V) supplied to the main microcomputer?
No
Replace the MAIN Assy.
Yes
Is voltage at REQ_IF on the MAIN Assy High (3.3 V)?
No
Can the unit be turned on, using the remote control unit?
No
Replace the cable (J117) that connects between the IR and MAIN Assys.
NG
Replace the IR Assy.
NG
Replace the MAIN Assy.
Yes
Yes
Can the unit be turned on, using the Power switch on the unit?
No
Replace the cable (J116) that connects between the SIDE KEY and MAIN Assys.
NG
Replace the SIDE KEY Assy.
NG
Replace the MAIN Assy.
Yes
Can the unit be turned on, using RS-232C commands?
No
Replace the 50P cable (J213) that connects between the IO and MAIN Assys.
NG
Replace the IO Assy.
NG
Replace the MAIN Assy.
Replace the MAIN Assy.

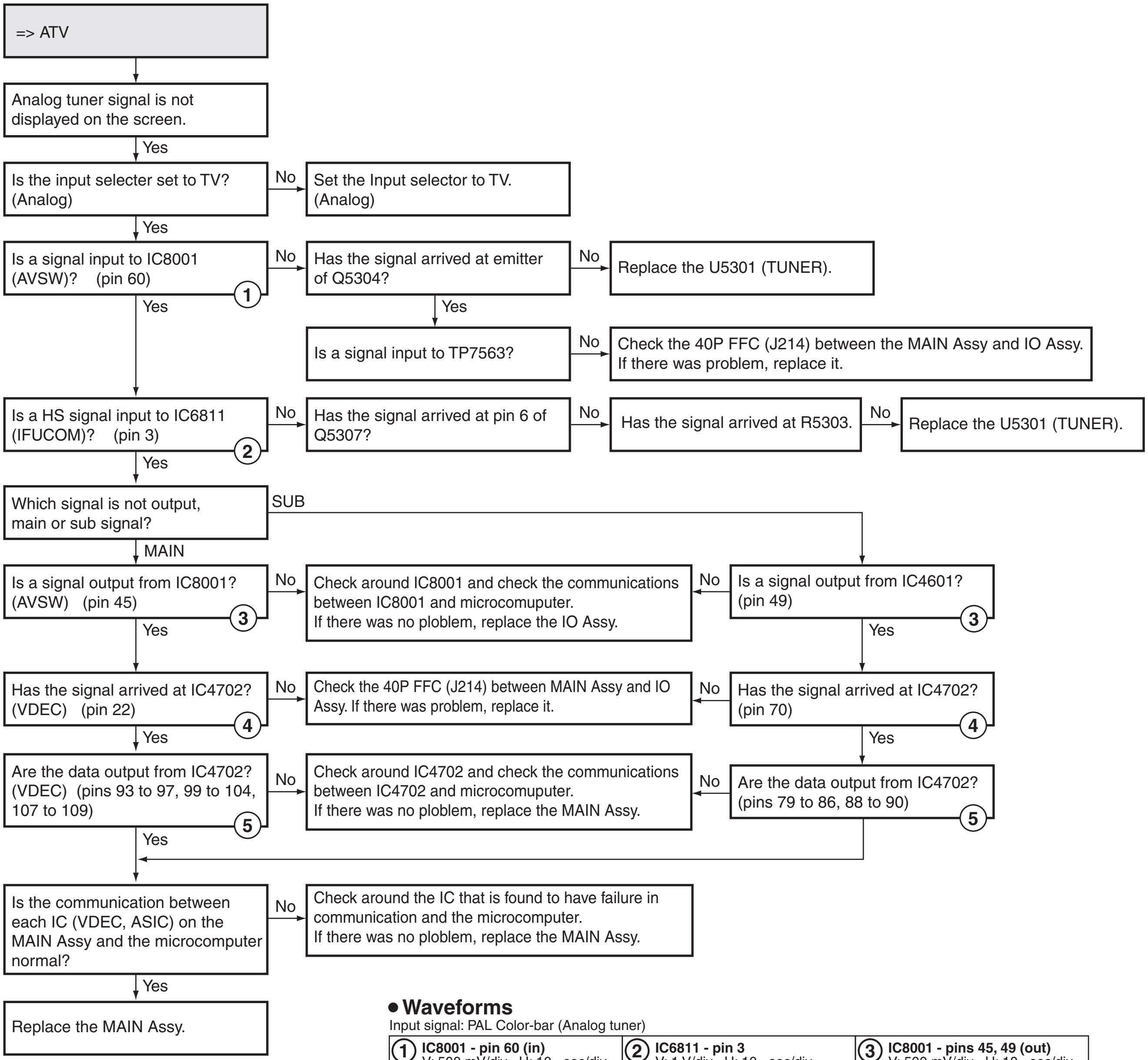
Relay control is unable unless it supplies a power supply to the module microcompute.

Flowchart of Failure Analysis for The Video System


Failure analysis for the MAIN Assy => MA3
The input signal is not displayed.
Is the selected input signal a terrestrial analog TV?
Yes
=> ATV
No
Is the selected input signal a composite signal?
Yes
=> COMP / S1
No
Is the selected input signal a S-video signal?
Yes
=> COMP / S1
No
Is the selected input signal a RGB signal (SCART)?
Yes
=> RGB
No
Is the selected input signal a component signal?
Yes
=> COMP / PC1
No
Is the selected input signal an PC signal?
Yes
=> COMP / PC2
No
Is the selected input signal a digital TV signal?
Yes
=> DTV
No
Is the selected input signal an HDMI signal?
Yes
Are the data displayed on the "HDMI SIGNAL INFO" page of the Factory menu correct?
No
After changing the source equipment, check the "HDMI SIGNAL INFO" data again.
NG
Replace the MAIN Assy.
OK
The source equipment previously used is in failure. No problem with the MAIN Assy.
Yes
Does the result of SIG mode detection on the Factory menu coincide with the input signal data?
No
Is the sync signal output from IC4901?
No
Replace the MAIN Assy.
Yes
Replace the MAIN Assy.
Yes
Is the sync signal input to IC6501?
No
Replace the MAIN Assy.
Yes
Replace the MAIN Assy.
No
No problem with the MAIN Assy

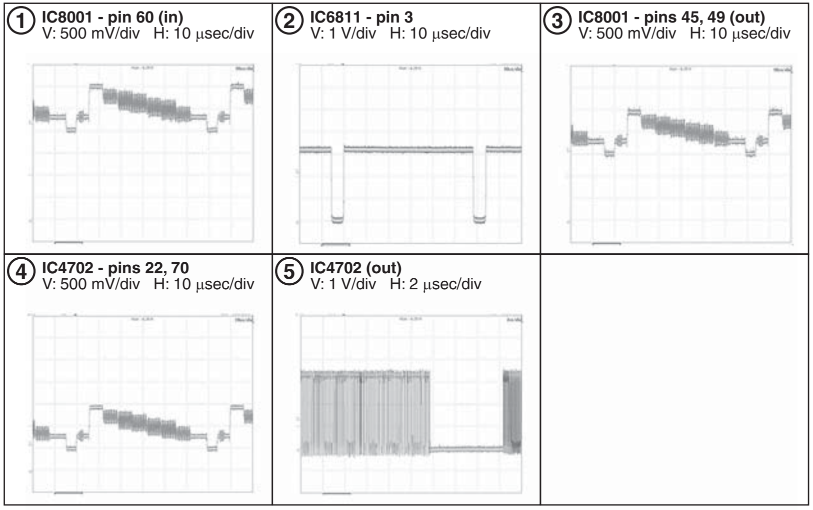
[6] VIDEO SYSTEM

Flowchart of Failure Analysis for The Video System


=> ATV
Analog tuner signal is not displayed on the screen.
Yes
Is the input selecter set to TV? (Analog)
No
Set the Input selector to TV. (Analog)
Yes
Is a signal input to IC8001 (AVSW)? (pin 60)
①
No
Has the signal arrived at emitter of Q5304?
No
Replace the U5301 (TUNER).
Yes
Is a signal input to TP7563?
No
Check the 40P FFC (J214) between the MAIN Assy and IO Assy. If there was problem, replace it.
Yes
Is a HS signal input to IC6811 (IFUCOM)? (pin 3)
②
No
Has the signal arrived at pin 6 of Q5307?
No
Has the signal arrived at R5303.
No
Replace the U5301 (TUNER).
Yes
Which signal is not output, main or sub signal?
SUB
MAIN
Is a signal output from IC8001? (AVSW) (pin 45)
③
No
Check around IC8001 and check the communications between IC8001 and microcomuputer. If there was no ploblem, replace the IO Assy.
No
Is a signal output from IC4601? (pin 49)
③
Yes
Has the signal arrived at IC4702? (VDEC) (pin 22)
④
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
No
Has the signal arrived at IC4702? (pin 70)
④
Yes
Are the data output from IC4702? (VDEC) (pins 93 to 97, 99 to 104, 107 to 109)
⑤
No
Check around IC4702 and check the communications between IC4702 and microcomuputer. If there was no ploblem, replace the MAIN Assy.
No
Are the data output from IC4702? (pins 79 to 86, 88 to 90)
⑤
Yes
Is the communication between each IC (VDEC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

• Waveforms

Input signal: PAL Color-bar (Analog tuner)

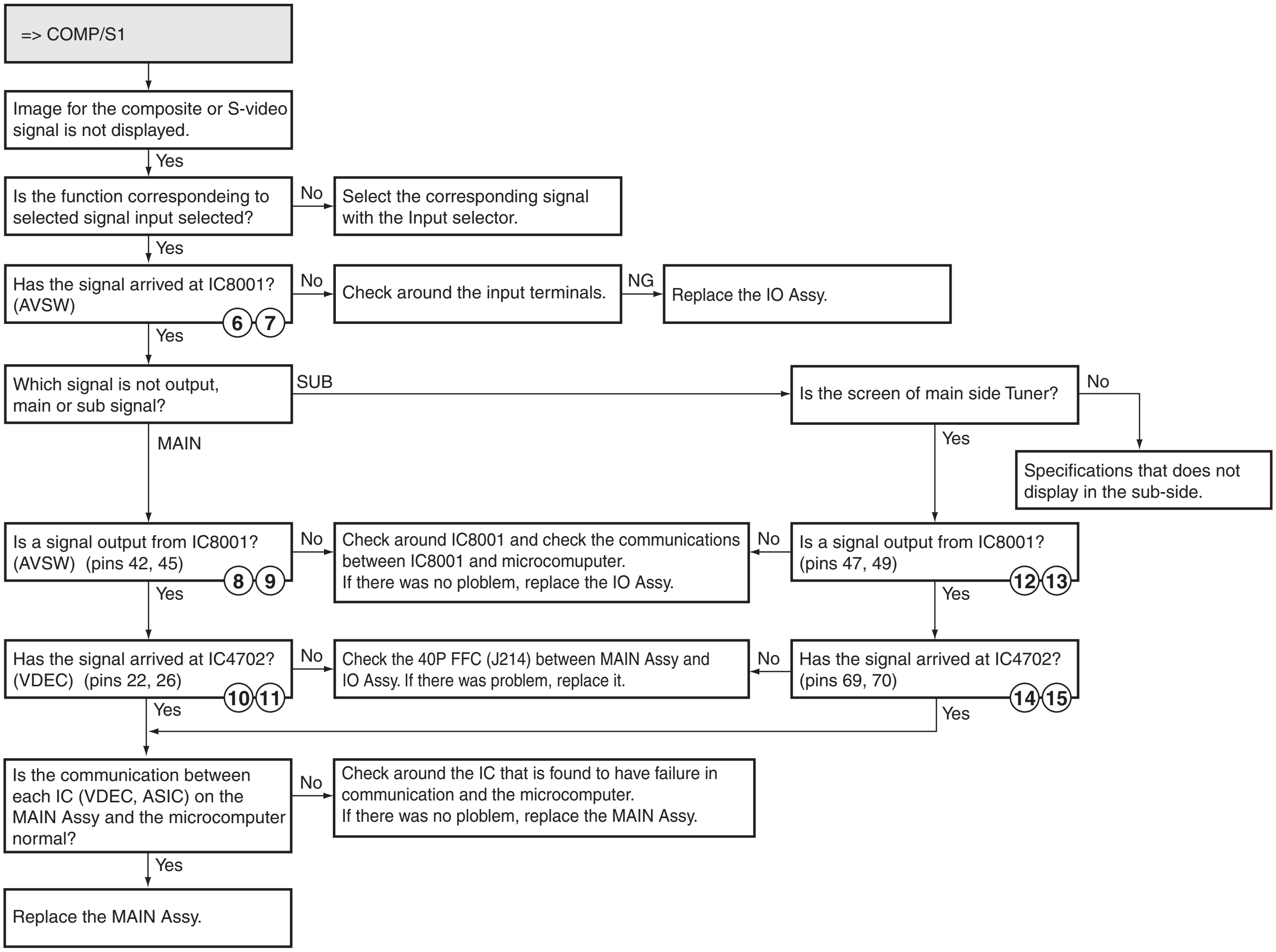

① **IC8001 - pin 60 (in)** V: 500 mV/div H: 10 μsec/div

② **IC6811 - pin 3** V: 1 V/div H: 10 μsec/div

③ **IC8001 - pins 45, 49 (out)** V: 500 mV/div H: 10 μsec/div

④ **IC4702 - pins 22, 70** V: 500 mV/div H: 10 μsec/div

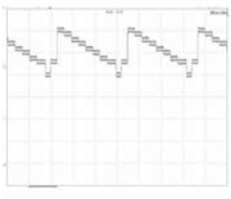
⑤ **IC4702 (out)** V: 1 V/div H: 2 μsec/div


=> COMP/S1
Image for the composite or S-video signal is not displayed.
Yes
Is the function correspondeing to selected signal input selected?
No
Select the corresponding signal with the Input selector.
Yes
Has the signal arrived at IC8001? (AVSW)
⑥ ⑦
No
Check around the input terminals.
NG
Replace the IO Assy.
Yes
Which signal is not output, main or sub signal?
SUB
Is the screen of main side Tuner?
No
Specifications that does not display in the sub-side.
Yes
MAIN
Is a signal output from IC8001? (AVSW) (pins 42, 45)
⑧ ⑨
No
Check around IC8001 and check the communications between IC8001 and micromuputer. If there was no ploblem, replace the IO Assy.
No
Is a signal output from IC8001? (pins 47, 49)
⑫ ⑬
Yes
Yes
Has the signal arrived at IC4702? (VDEC) (pins 22, 26)
⑩ ⑪
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
No
Has the signal arrived at IC4702? (pins 69, 70)
⑭ ⑮
Yes
Yes
Is the communication between each IC (VDEC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

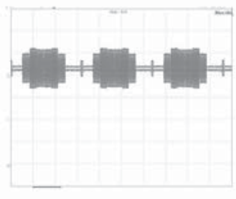
- **Waveforms**

Input signal: PAL Color-bar (S termial)

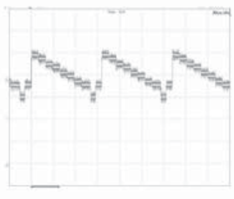
⑥ **IC8001 - pins 87, 93 (Y)**
V: 500 mV/div H: 20 µsec/div



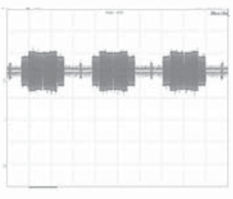
⑦ **IC8001 - pins 89, 95 (C)**
V: 500 mV/div H: 20 µsec/div



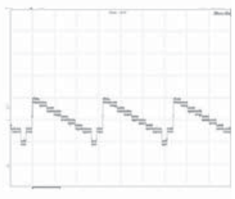
⑧ **IC8001 - pin 45 (Main Y)**
V: 500 mV/div H: 20 µsec/div



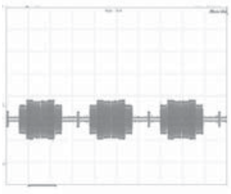
⑨ **IC8001 - pin 42 (Main C)**
V: 500 mV/div H: 20 µsec/div



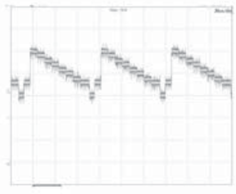
⑩ **IC4702 - pin 22 (Main Y)**
V: 500 mV/div H: 20 µsec/div



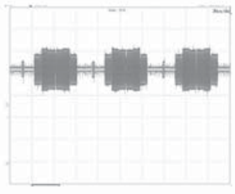
⑪ **IC4702 - pin 26 (Main C)**
V: 500 mV/div H: 20 µsec/div



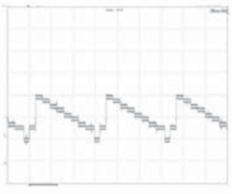
⑫ **IC8001 - pin 49 (Sub Y)**
V: 500 mV/div H: 20 µsec/div



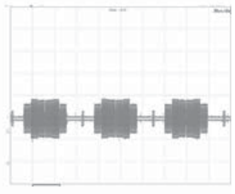
⑬ **IC8001 - pin 47 (Sub C)**
V: 500 mV/div H: 20 µsec/div

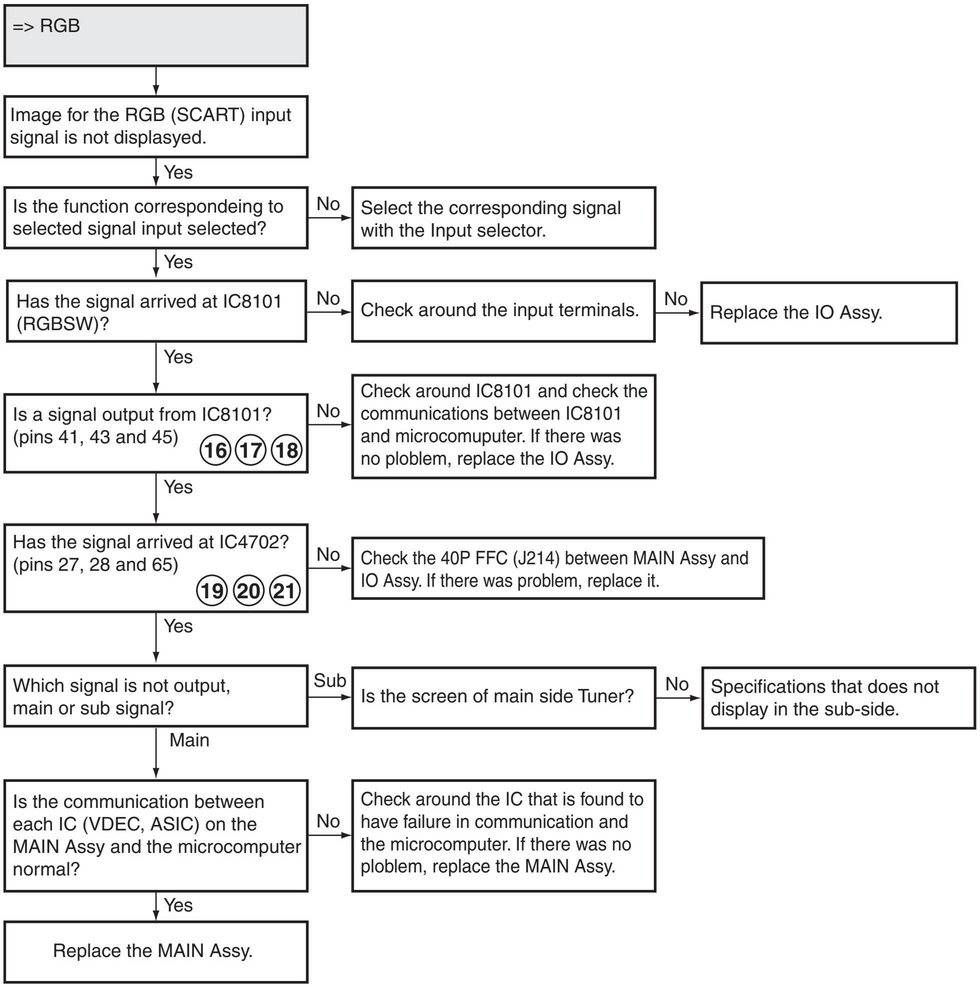


⑭ **IC4702 - pin 70 (Sub Y)**
V: 500 mV/div H: 20 µsec/div



⑮ **IC4702 - pin 69 (Sub C)**
V: 500 mV/div H: 20 µsec/div

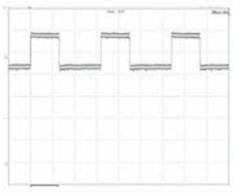



=> RGB
Image for the RGB (SCART) input signal is not displasyed.
Yes
Is the function correspondeing to selected signal input selected?
No
Select the corresponding signal with the Input selector.
Yes
Has the signal arrived at IC8101 (RGBSW)?
No
Check around the input terminals.
No
Replace the IO Assy.
Yes
Is a signal output from IC8101? (pins 41, 43 and 45) ⑯ ⑰ ⑱
No
Check around IC8101 and check the communications between IC8101 and microcomuputer. If there was no ploblem, replace the IO Assy.
Yes
Has the signal arrived at IC4702? (pins 27, 28 and 65) ⑲ ⑳ ㉑
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
Yes
Which signal is not output, main or sub signal?
Sub
Is the screen of main side Tuner?
No
Specifications that does not display in the sub-side.
Main
Is the communication between each IC (VDEC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

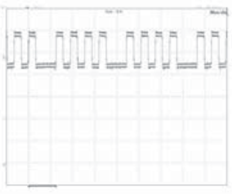
• Waveforms

Input signal: PAL Color-bar (SCART RGB terminal)

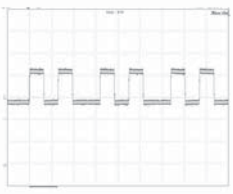
⑯ **IC8101 - pin 45 (G out)**
V: 500 mV/div H: 20 μS/div



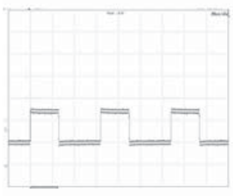
⑰ **IC8101 - pin 43 (B out)**
V: 500 mV/div H: 20 μS/div



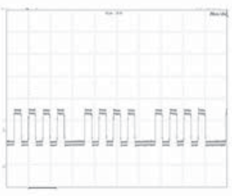
⑱ **IC8101 - pin 41 (B out)**
V: 500 mV/div H: 20 μS/div



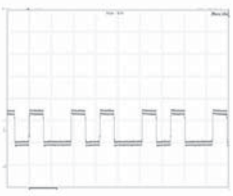
⑲ **IC4702 - pin 65 (GY)**
V: 500 mV/div H: 20 μS/div

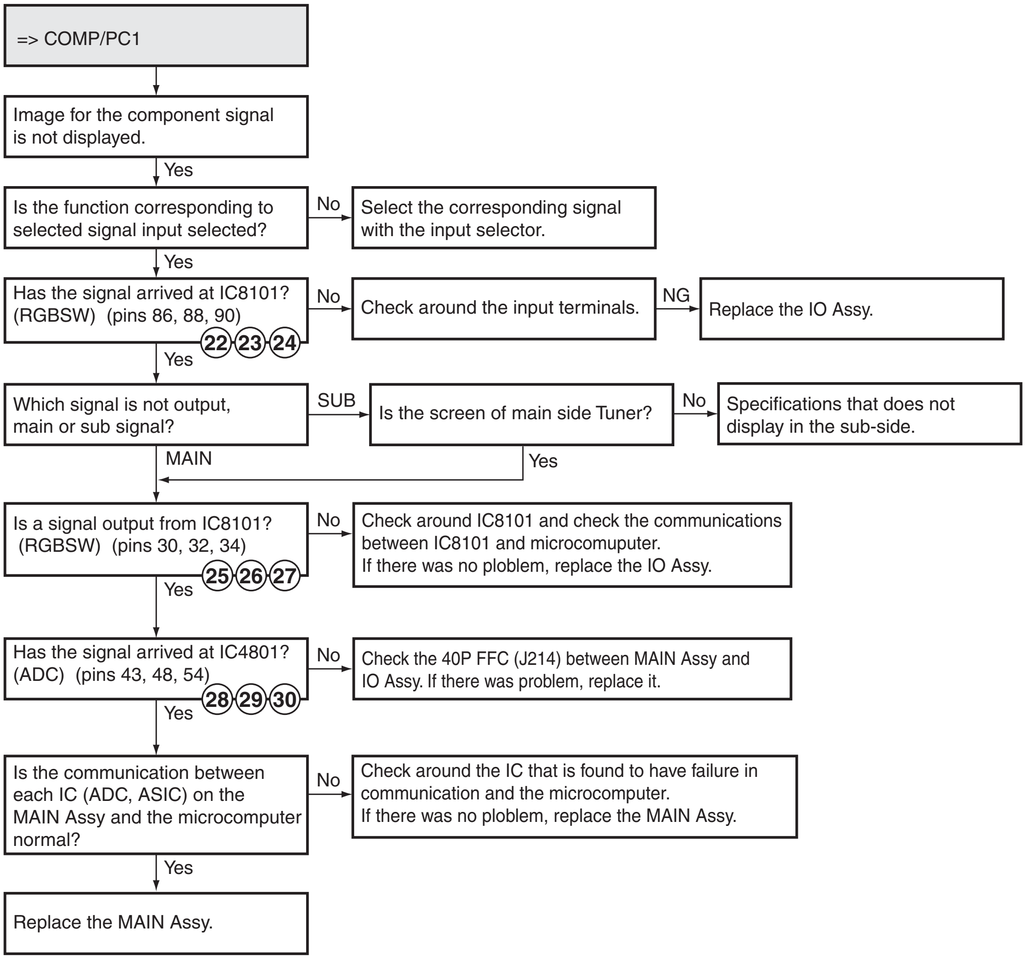


⑳ **IC47021 - pin 27 (BCB)**
V: 500 mV/div H: 20 μS/div



㉑ **IC4702 - pin 28 (BCR)**
V: 500 mV/div H: 20 μS/div

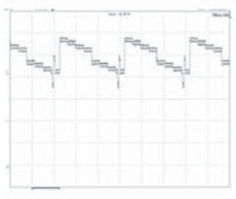



=> COMP/PC1
Image for the component signal is not displayed.
Yes
Is the function corresponding to selected signal input selected?
No
Select the corresponding signal with the input selector.
Yes
Has the signal arrived at IC8101? (RGBSW) (pins 86, 88, 90) ㉒㉓㉔
No
Check around the input terminals.
NG
Replace the IO Assy.
Yes
Which signal is not output, main or sub signal?
SUB
Is the screen of main side Tuner?
No
Specifications that does not display in the sub-side.
Yes
MAIN
Is a signal output from IC8101? (RGBSW) (pins 30, 32, 34) ㉕㉖㉗
No
Check around IC8101 and check the communications between IC8101 and microcomuputer. If there was no ploblem, replace the IO Assy.
Yes
Has the signal arrived at IC4801? (ADC) (pins 43, 48, 54) ㉘㉙㉚
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
Yes
Is the communication between each IC (ADC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

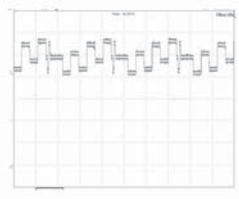
• Waveforms

Input signal: Color-bar (Component 720p/50 Hz)

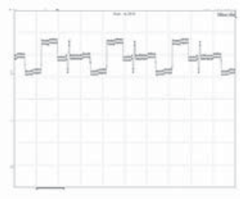
㉒ **IC8101 - pin 86 (Y)**
V: 500 mV/div H: 20 µsec/div



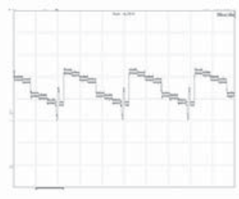
㉓ **IC8101 - pin 88 (Pb)**
V: 500 mV/div H: 20 µsec/div



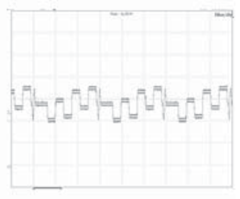
㉔ **IC8101 - pin 90 (Pr)**
V: 500 mV/div H: 20 µsec/div



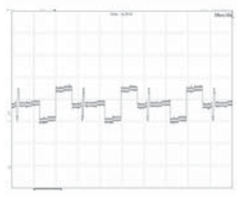
㉕ **IC8101 - pin 34 (Y)**
V: 500 mV/div H: 20 µsec/div



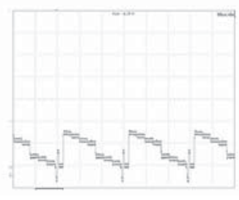
㉖ **IC8101 - pin 32 (Pb)**
V: 500 mV/div H: 20 µsec/div



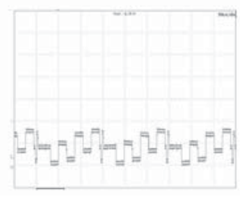
㉗ **IC8101 - pin 30 (Pr)**
V: 500 mV/div H: 20 µsec/div



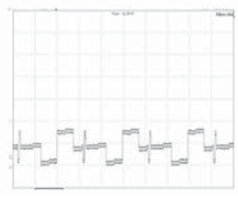
㉘ **IC4801 - pin 48 (Y)**
V: 500 mV/div H: 20 µsec/div

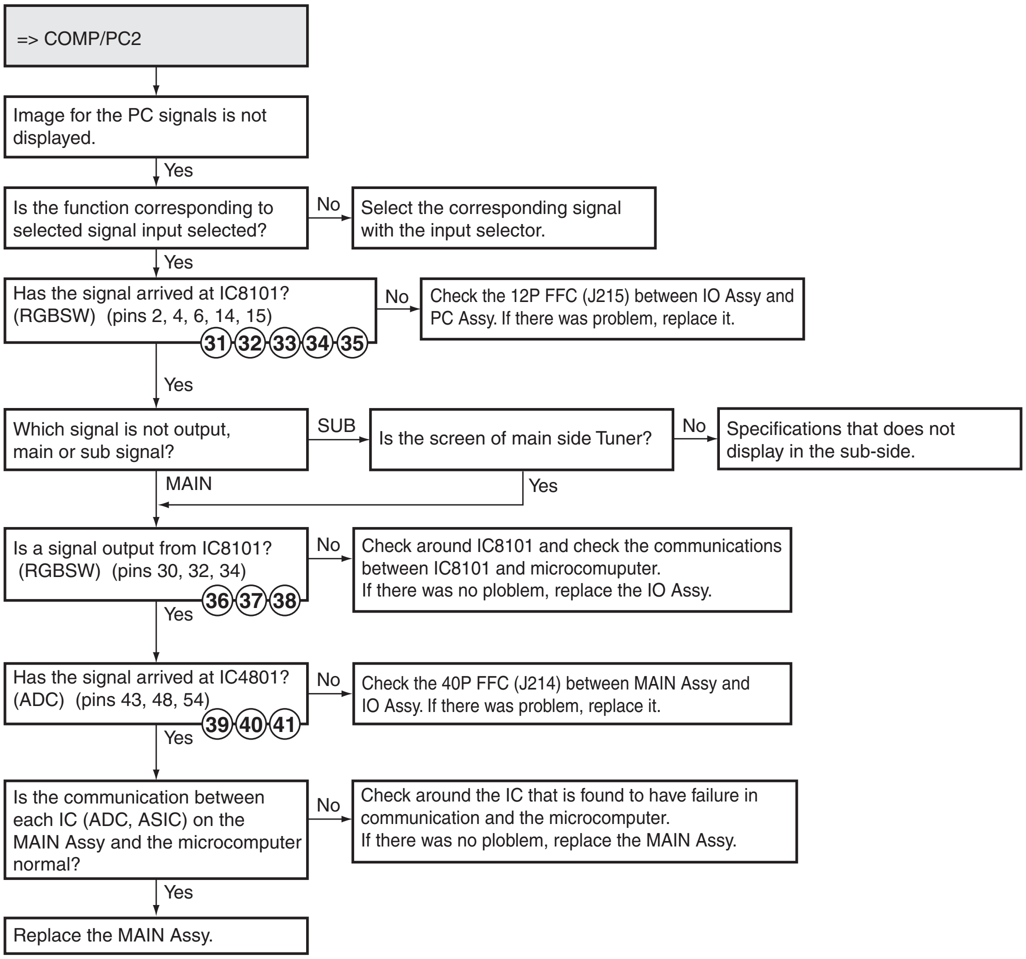


㉙ **IC4801 - pin 43 (Pb)**
V: 500 mV/div H: 20 µsec/div



㉚ **IC4801 - pin 54 (Pr)**
V: 500 mV/div H: 20 µsec/div

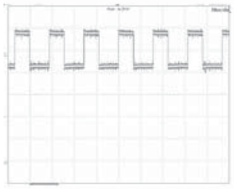



=> COMP/PC2
Image for the PC signals is not displayed.
Yes
Is the function corresponding to selected signal input selected?
No
Select the corresponding signal with the input selector.
Yes
Has the signal arrived at IC8101? (RGBSW) (pins 2, 4, 6, 14, 15)
㉛㉜㉝㉞㉟
No
Check the 12P FFC (J215) between IO Assy and PC Assy. If there was problem, replace it.
Yes
Which signal is not output, main or sub signal?
SUB
Is the screen of main side Tuner?
No
Specifications that does not display in the sub-side.
MAIN
Yes
Is a signal output from IC8101? (RGBSW) (pins 30, 32, 34)
㊱㊲㊳
No
Check around IC8101 and check the communications between IC8101 and microcomuputer.
If there was no ploblem, replace the IO Assy.
Yes
Has the signal arrived at IC4801? (ADC) (pins 43, 48, 54)
㊴㊵㊶
No
Check the 40P FFC (J214) between MAIN Assy and IO Assy. If there was problem, replace it.
Yes
Is the communication between each IC (ADC, ASIC) on the MAIN Assy and the microcomputer normal?
No
Check around the IC that is found to have failure in communication and the microcomputer.
If there was no ploblem, replace the MAIN Assy.
Yes
Replace the MAIN Assy.

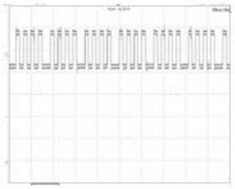
• Waveforms

Input signal: Color-bar (PC SXGA/60 Hz)

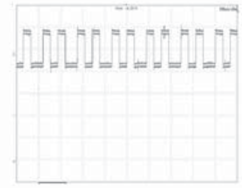
㉛ **IC8101 - pin 2 (G in)**
V: 500 mV/div H: 10 µsec/div



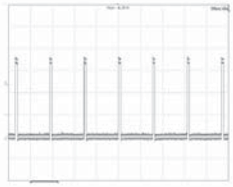
㉜ **IC8101 - pin 4 (B in)**
V: 500 mV/div H: 10 µsec/div



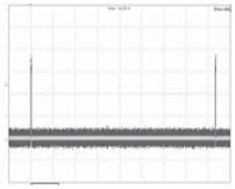
㉝ **IC8101 - pin 6 (R in)**
V: 500 mV/div H: 10 µsec/div



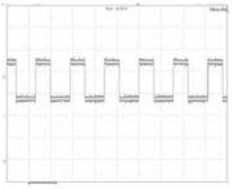
㉞ **IC8101 - pin 14 (HD in)**
V: 1 V/div H: 10 µsec/div
(polarity is no care)



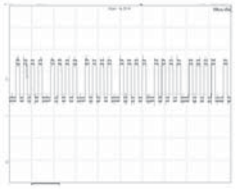
㉟ **IC8101 - pin 15 (VD in)**
V: 1 V/div H: 2 msec/div
(polarity is no care)



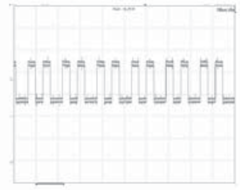
㊱ **IC8101 - pin 34 (G out)**
V: 500 mV/div H: 10 µsec/div



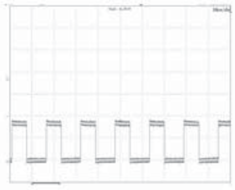
㊲ **IC8101 - pin 32 (B out)**
V: 500 mV/div H: 10 µsec/div



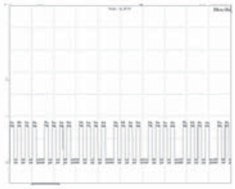
㊳ **IC8101 - pin 30 (R out)**
V: 500 mV/div H: 10 µsec/div



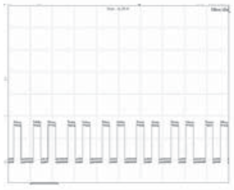
㊴ **IC4801 - pin 48 (G)**
V: 500 mV/div H: 10 µsec/div

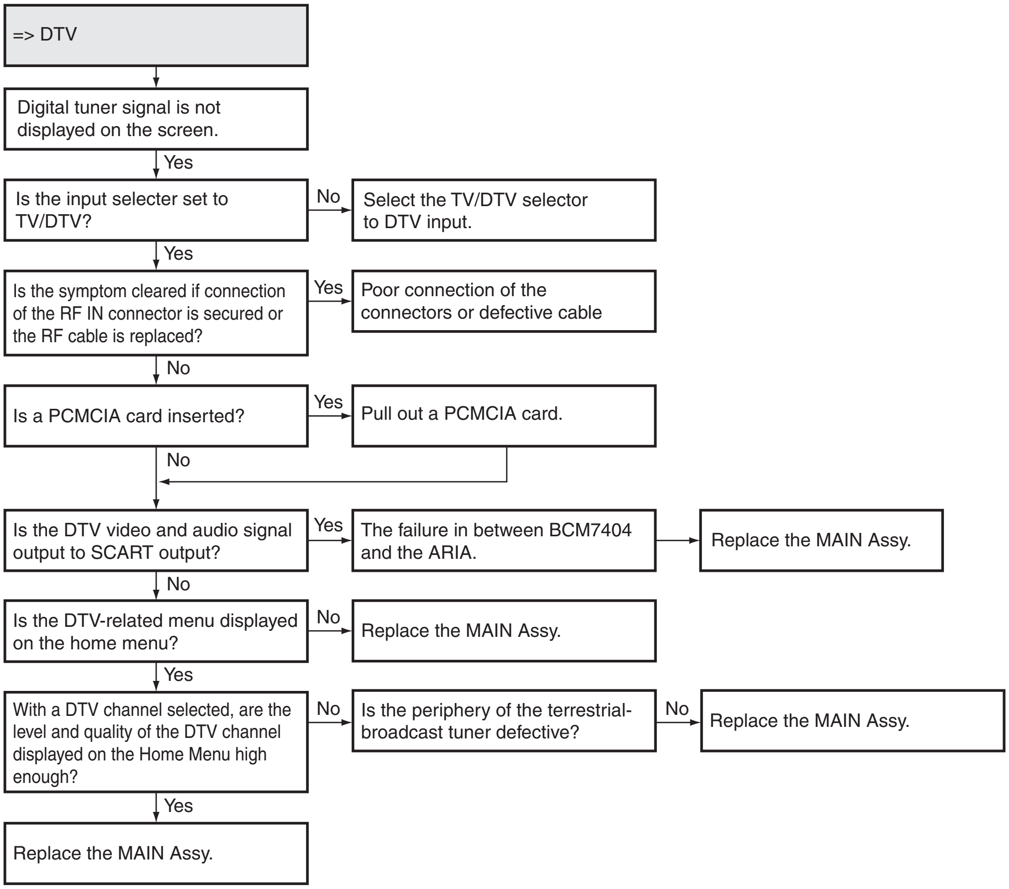


㊵ **IC4801 - pin 43 (B)**
V: 500 mV/div H: 10 µsec/div



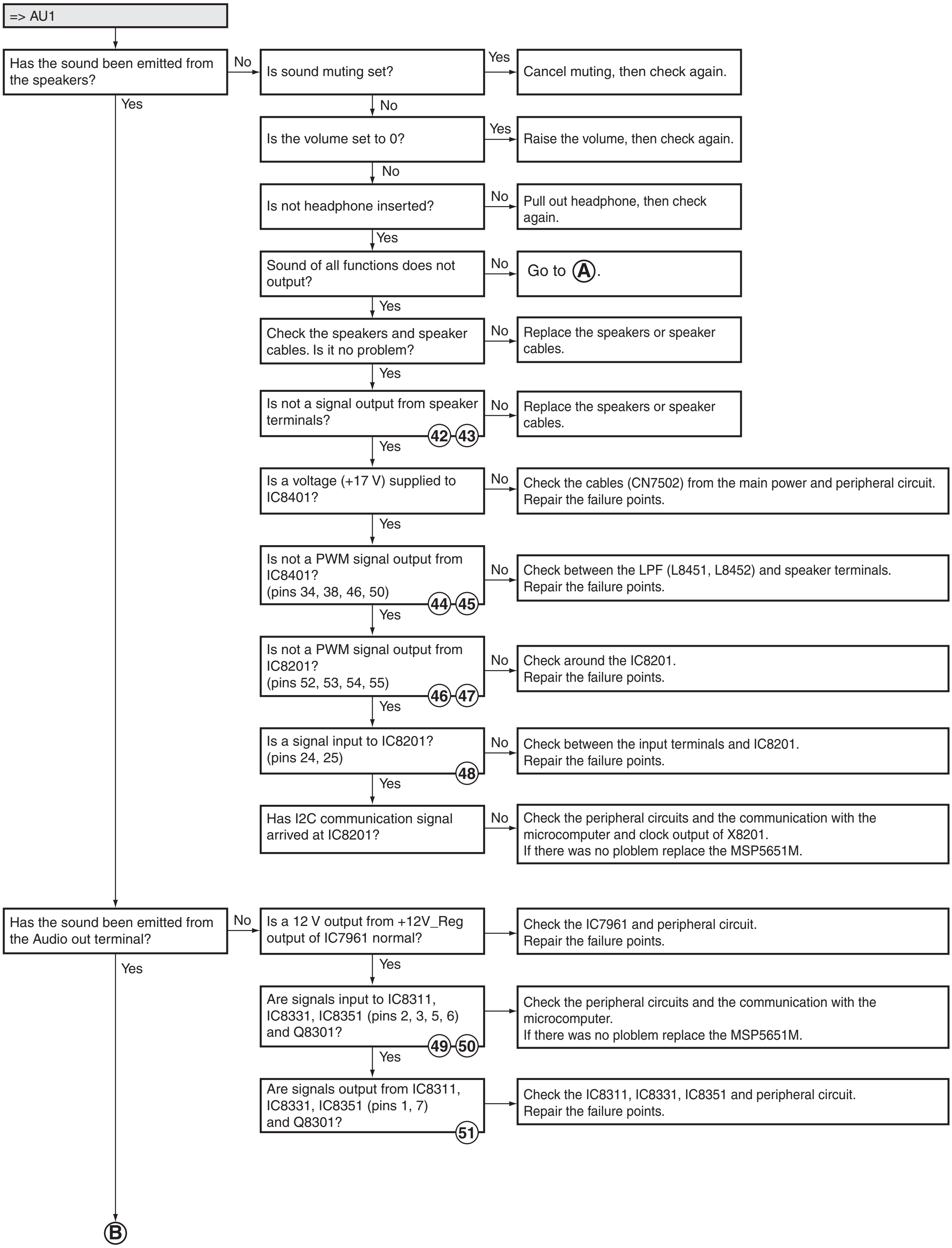
㊶ **IC4801 - pin 54 (R)**
V: 500 mV/div H: 10 µsec/div




=> DTV
Digital tuner signal is not displayed on the screen.
Yes
Is the input selecter set to TV/DTV?
No
Select the TV/DTV selector to DTV input.
Yes
Is the symptom cleared if connection of the RF IN connector is secured or the RF cable is replaced?
Yes
Poor connection of the connectors or defective cable
No
Is a PCMCIA card inserted?
Yes
Pull out a PCMCIA card.
No
Is the DTV video and audio signal output to SCART output?
Yes
The failure in between BCM7404 and the ARIA.
Replace the MAIN Assy.
No
Is the DTV-related menu displayed on the home menu?
No
Replace the MAIN Assy.
Yes
With a DTV channel selected, are the level and quality of the DTV channel displayed on the Home Menu high enough?
No
Is the periphery of the terrestrial-broadcast tuner defective?
No
Replace the MAIN Assy.
Yes
Replace the MAIN Assy.

[7] AUDIO SYSTEM

Flowchart of Failure Analysis for The Audio System



=> AU1

Has the sound been emitted from the speakers?

Is sound muting set?

Cancel muting, then check again.

Is the volume set to 0?

Raise the volume, then check again.

Is not headphone inserted?

Pull out headphone, then check again.

Sound of all functions does not output?

Go to Ⓐ.

Check the speakers and speaker cables. Is it no problem?

Replace the speakers or speaker cables.

Is not a signal output from speaker terminals?

Replace the speakers or speaker cables.

Is a voltage (+17 V) supplied to IC8401?

Check the cables (CN7502) from the main power and peripheral circuit. Repair the failure points.

Is not a PWM signal output from IC8401? (pins 34, 38, 46, 50)

Check between the LPF (L8451, L8452) and speaker terminals. Repair the failure points.

Is not a PWM signal output from IC8201? (pins 52, 53, 54, 55)

Check around the IC8201. Repair the failure points.

Is a signal input to IC8201? (pins 24, 25)

Check between the input terminals and IC8201. Repair the failure points.

Has I2C communication signal arrived at IC8201?

Check the peripheral circuits and the communication with the microcomputer and clock output of X8201. If there was no ploblem replace the MSP5651M.

Has the sound been emitted from the Audio out terminal?

Is a 12 V output from +12V_Reg output of IC7961 normal?

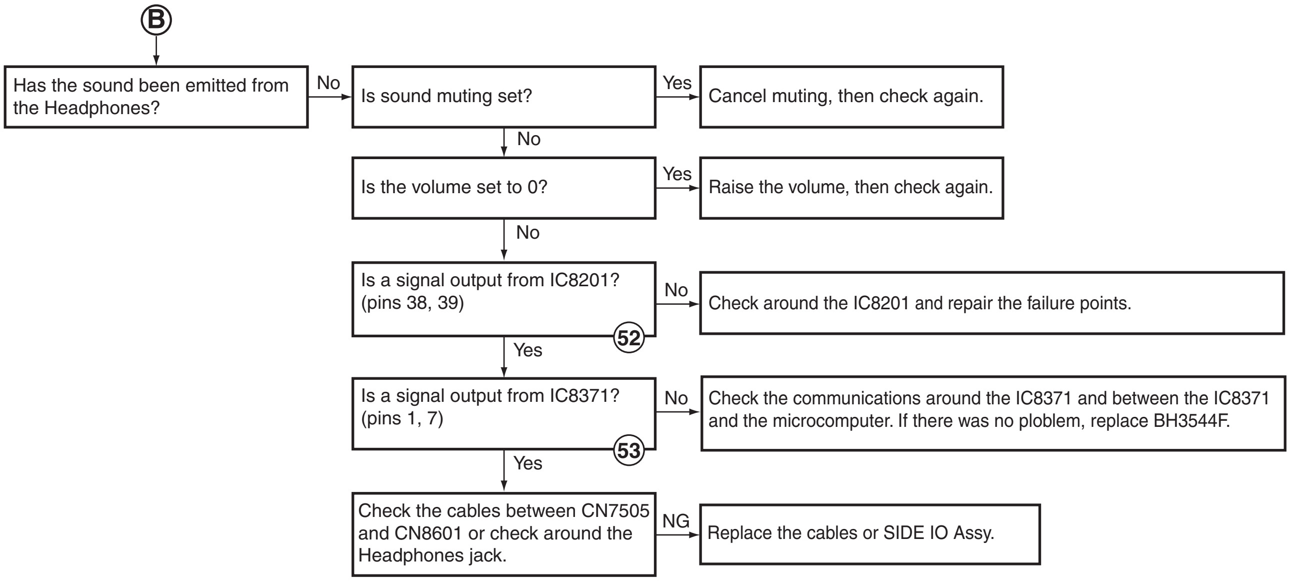
Check the IC7961 and peripheral circuit. Repair the failure points.

Are signals input to IC8311, IC8331, IC8351 (pins 2, 3, 5, 6) and Q8301?

Check the peripheral circuits and the communication with the microcomputer. If there was no ploblem replace the MSP5651M.

Are signals output from IC8311, IC8331, IC8351 (pins 1, 7) and Q8301?

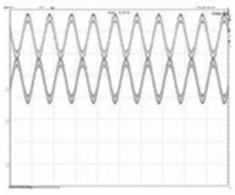
Check the IC8311, IC8331, IC8351 and peripheral circuit. Repair the failure points.


B
Has the sound been emitted from the Headphones?
No
Is sound muting set?
Yes
Cancel muting, then check again.
No
Is the volume set to 0?
Yes
Raise the volume, then check again.
No
Is a signal output from IC8201? (pins 38, 39)
(52)
No
Check around the IC8201 and repair the failure points.
Yes
Is a signal output from IC8371? (pins 1, 7)
(53)
No
Check the communications around the IC8371 and between the IC8371 and the microcomputer. If there was no ploblem, replace BH3544F.
Yes
Check the cables between CN7505 and CN8601 or check around the Headphones jack.
NG
Replace the cables or SIDE IO Assy.

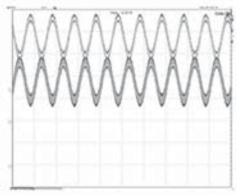
• Waveforms

Input signal: L/R 1 kHz, 0.5 Vrms (VOL 30)

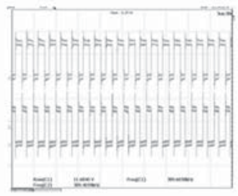
㊷ **JA8551 - pins 1, 2**
V: 2 V/div H: 1 mS/div



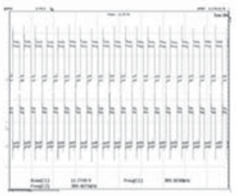
㊸ **JA8551 - pins 3, 4**
V: 2 V/div H: 1 mS/div



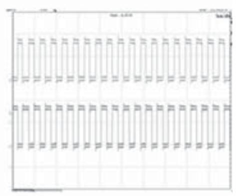
㊹ **IC8401 - pins 34, 38**
V: 10 V/div H: 5 µS/div



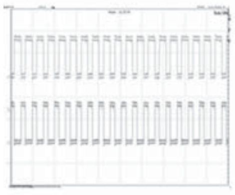
㊺ **IC8401 - pins 46, 50**
V: 10 V/div H: 5 µS/div



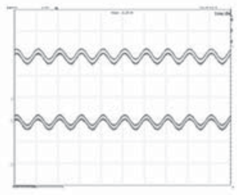
㊻ **IC8201 - pins 52, 53**
V: 2 V/div H: 5 µS/div



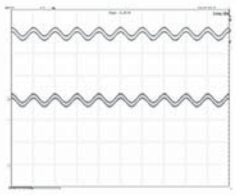
㊼ **IC8201 - pins 54, 55**
V: 2 V/div H: 5 µS/div



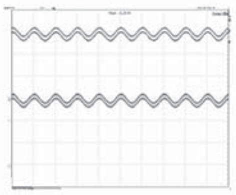
㊽ **IC8201 - pins 24, 25**
V: 2 V/div H: 1 mS/div



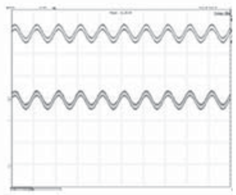
㊾ **IC8331 - pins 2, 3**
V: 2 V/div H: 1 mS/div



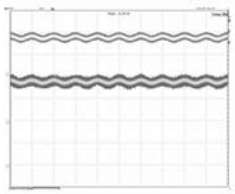
㊿ **IC8331 - pins 5, 6**
V: 2 V/div H: 1 mS/div



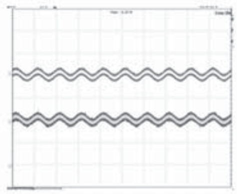
(51) **IC8331 - pin 17**
V: 2 V/div H: 1 mS/div

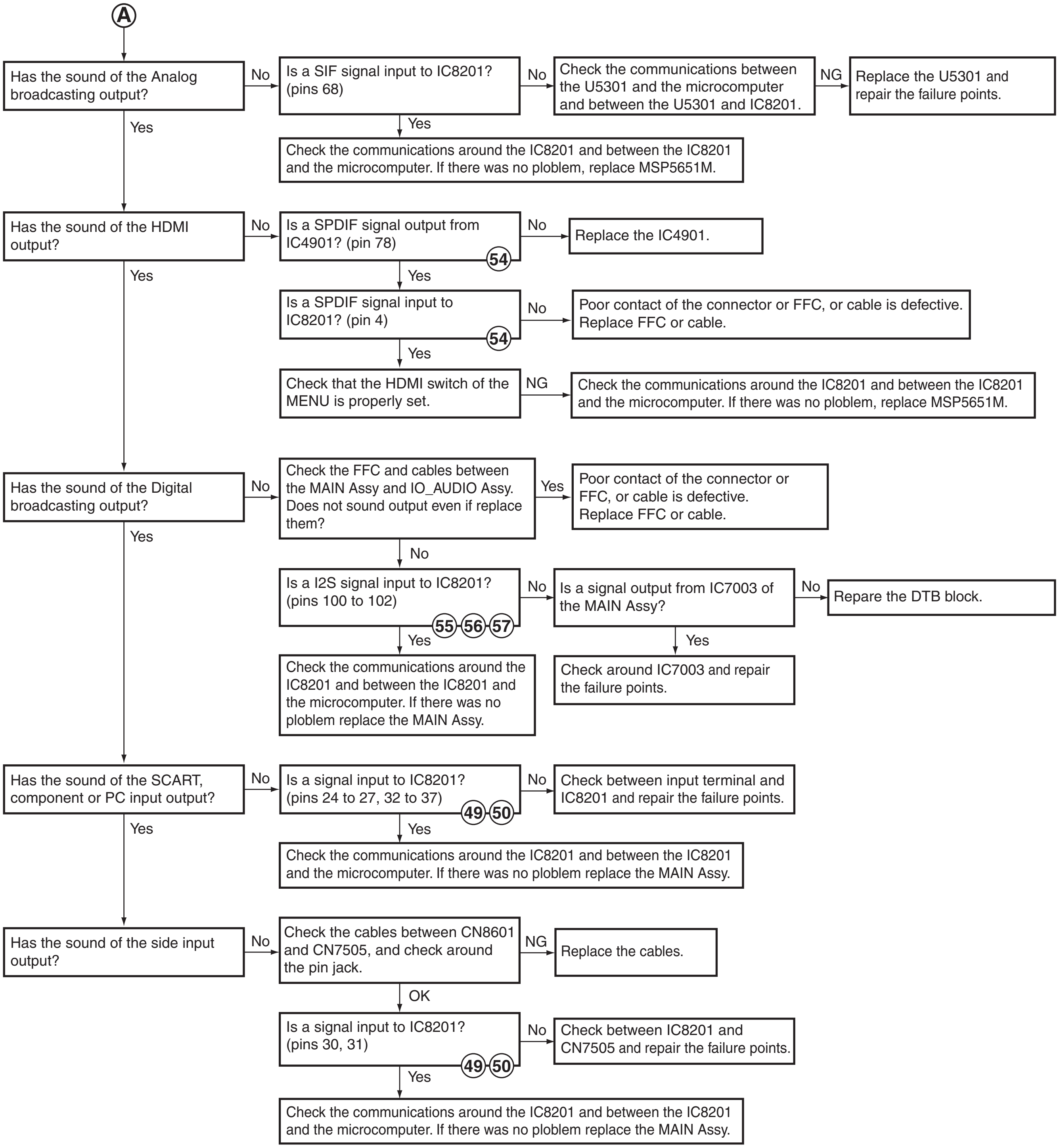


(52) **IC8201 - pins 38, 39**
V: 1 V/div H: 1 mS/div



(53) **IC8271 - pins 1, 7**
V: 1 V/div H: 1 mS/div

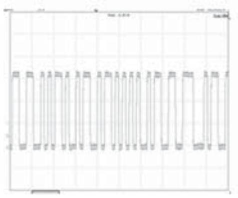



A
Has the sound of the Analog broadcasting output?
No
Is a SIF signal input to IC8201? (pins 68)
No
Check the communications between the U5301 and the microcomputer and between the U5301 and IC8201.
NG
Replace the U5301 and repair the failure points.
Yes
Check the communications around the IC8201 and between the IC8201 and the microcomputer. If there was no ploblem, replace MSP5651M.
Yes
Has the sound of the HDMI output?
No
Is a SPDIF signal output from IC4901? (pin 78)
54
No
Replace the IC4901.
Yes
Is a SPDIF signal input to IC8201? (pin 4)
54
No
Poor contact of the connector or FFC, or cable is defective. Replace FFC or cable.
Yes
Check that the HDMI switch of the MENU is properly set.
NG
Check the communications around the IC8201 and between the IC8201 and the microcomputer. If there was no ploblem, replace MSP5651M.
Yes
Has the sound of the Digital broadcasting output?
No
Check the FFC and cables between the MAIN Assy and IO_AUDIO Assy. Does not sound output even if replace them?
Yes
Poor contact of the connector or FFC, or cable is defective. Replace FFC or cable.
No
Is a I2S signal input to IC8201? (pins 100 to 102)
55 56 57
No
Is a signal output from IC7003 of the MAIN Assy?
No
Repare the DTB block.
Yes
Check around IC7003 and repair the failure points.
Yes
Check the communications around the IC8201 and between the IC8201 and the microcomputer. If there was no ploblem replace the MAIN Assy.
Yes
Has the sound of the SCART, component or PC input output?
No
Is a signal input to IC8201? (pins 24 to 27, 32 to 37)
49 50
No
Check between input terminal and IC8201 and repair the failure points.
Yes
Check the communications around the IC8201 and between the IC8201 and the microcomputer. If there was no ploblem replace the MAIN Assy.
Yes
Has the sound of the side input output?
No
Check the cables between CN8601 and CN7505, and check around the pin jack.
NG
Replace the cables.
OK
Is a signal input to IC8201? (pins 30, 31)
49 50
No
Check between IC8201 and CN7505 and repair the failure points.
Yes
Check the communications around the IC8201 and between the IC8201 and the microcomputer. If there was no ploblem replace the MAIN Assy.

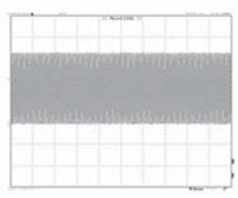
• Waveforms

Input signal: L/R 1 kHz, 0.5 Vrms (VOL 30)

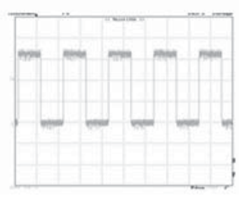
(54) **IC4901 - pin 78, IC8201- pin4**
V: 1 V/div H: 1 µS/div



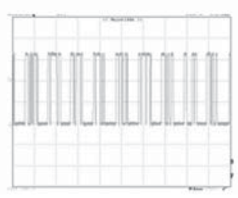
(55) **IC8201 - pin 106**
V: 1 V/div H: 10 µS/div



(56) **IC8201 - pin 107**
V: 1 V/div H: 10 µS/div

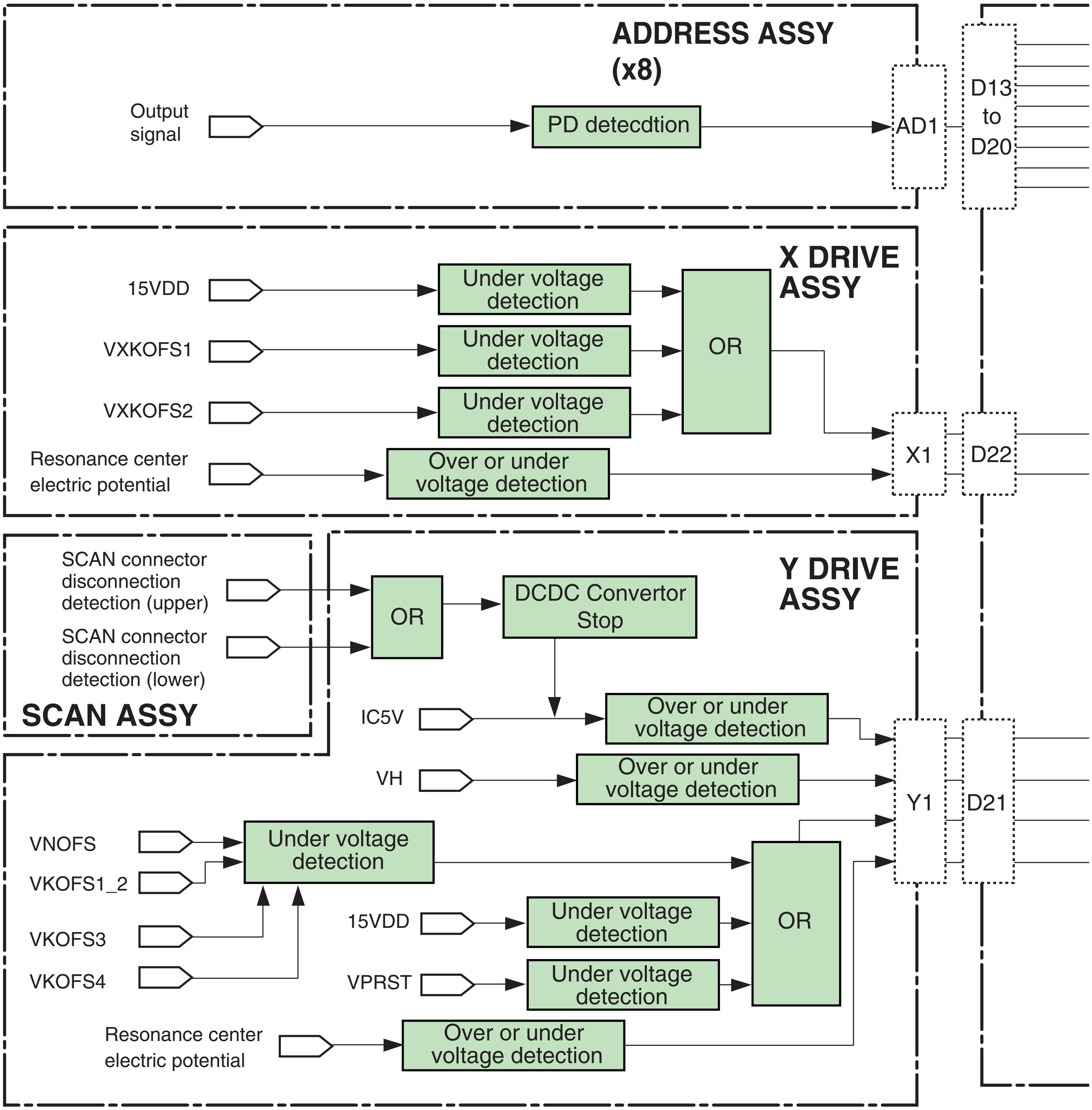


(57) **IC8201 - pin 108**
V: 1 V/div H: 10 µS/div

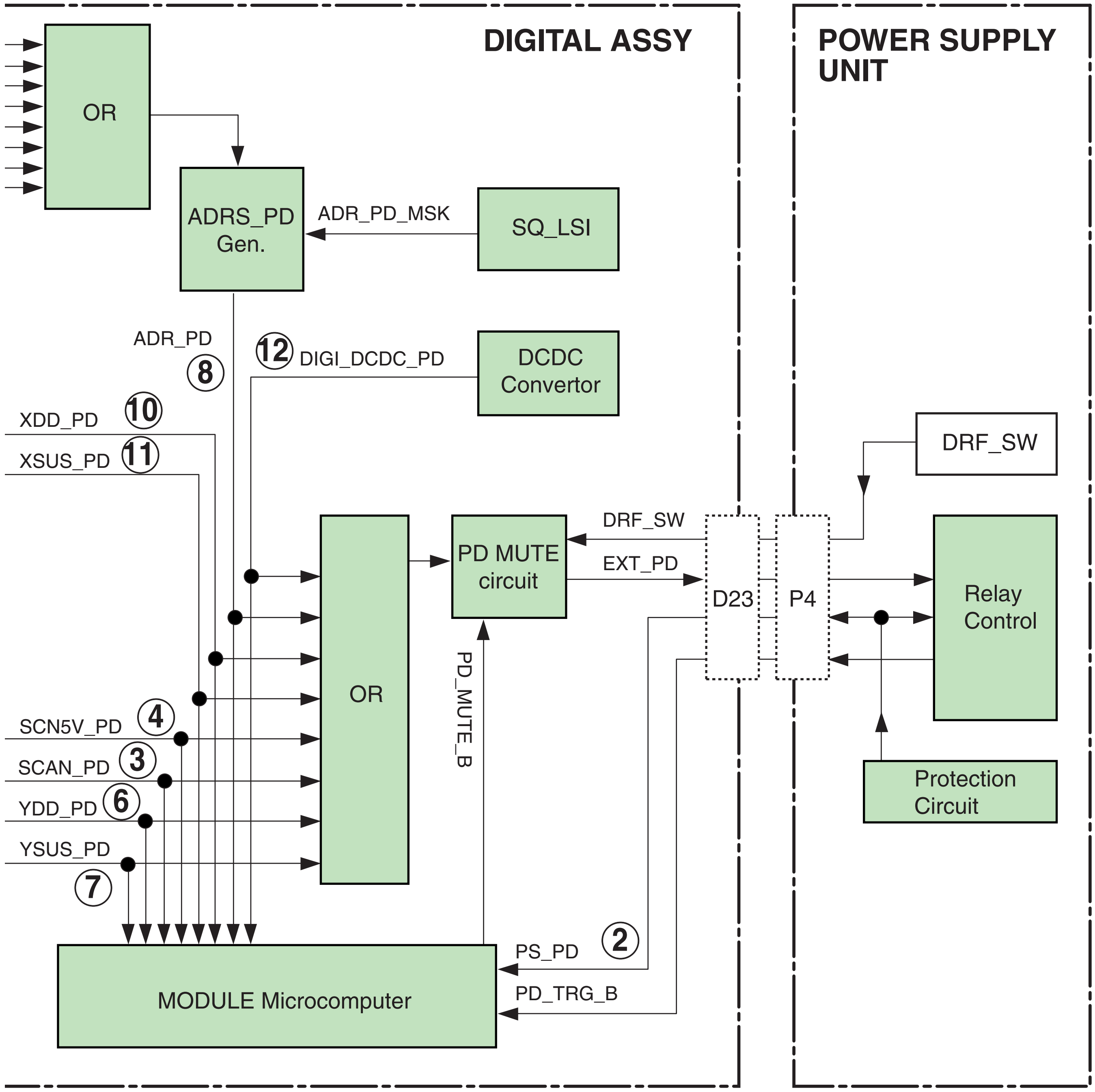


5.3 DIAGNOSIS OF PD (POWER-DOWN)

[1] BLOCK DIAGRAM OF THE POWER-DOWN SIGNAL


ADDRESS ASSY (x8)
Output signal
PD detecdtion
AD1
D13 to D20
X DRIVE ASSY
15VDD
VXKOFS1
VXKOFS2
Resonance center electric potential
Under voltage detection
Under voltage detection
Under voltage detection
OR
Over or under voltage detection
X1
D22
SCAN connector disconnection detection (upper)
SCAN connector disconnection detection (lower)
SCAN ASSY
OR
DCDC Convertor Stop
Y DRIVE ASSY
IC5V
Over or under voltage detection
VH
Over or under voltage detection
VNOFS
VKOFS1_2
VKOFS3
VKOFS4
Under voltage detection
15VDD
Under voltage detection
VPRST
Under voltage detection
OR
Resonance center electric potential
Over or under voltage detection
Y1
D21

Note:
The figures ② to ⑫ indicate the number of times the Red LED flashes when power-down occurs in the corresponding route.


DIGITAL ASSY
POWER SUPPLY UNIT
OR
ADRS_PD Gen.
ADR_PD_MSK
SQ_LSI
ADR_PD
⑧
⑫
DIGI_DCDC_PD
DCDC Convertor
XDD_PD
⑩
XSUS_PD
⑪
DRF_SW
OR
PD MUTE circuit
DRF_SW
EXT_PD
D23
P4
Relay Control
PD_MUTE_B
SCN5V_PD
④
SCAN_PD
③
YDD_PD
⑥
YSUS_PD
⑦
Protection Circuit
PS_PD
②
PD_TRG_B
MODULE Microcomputer

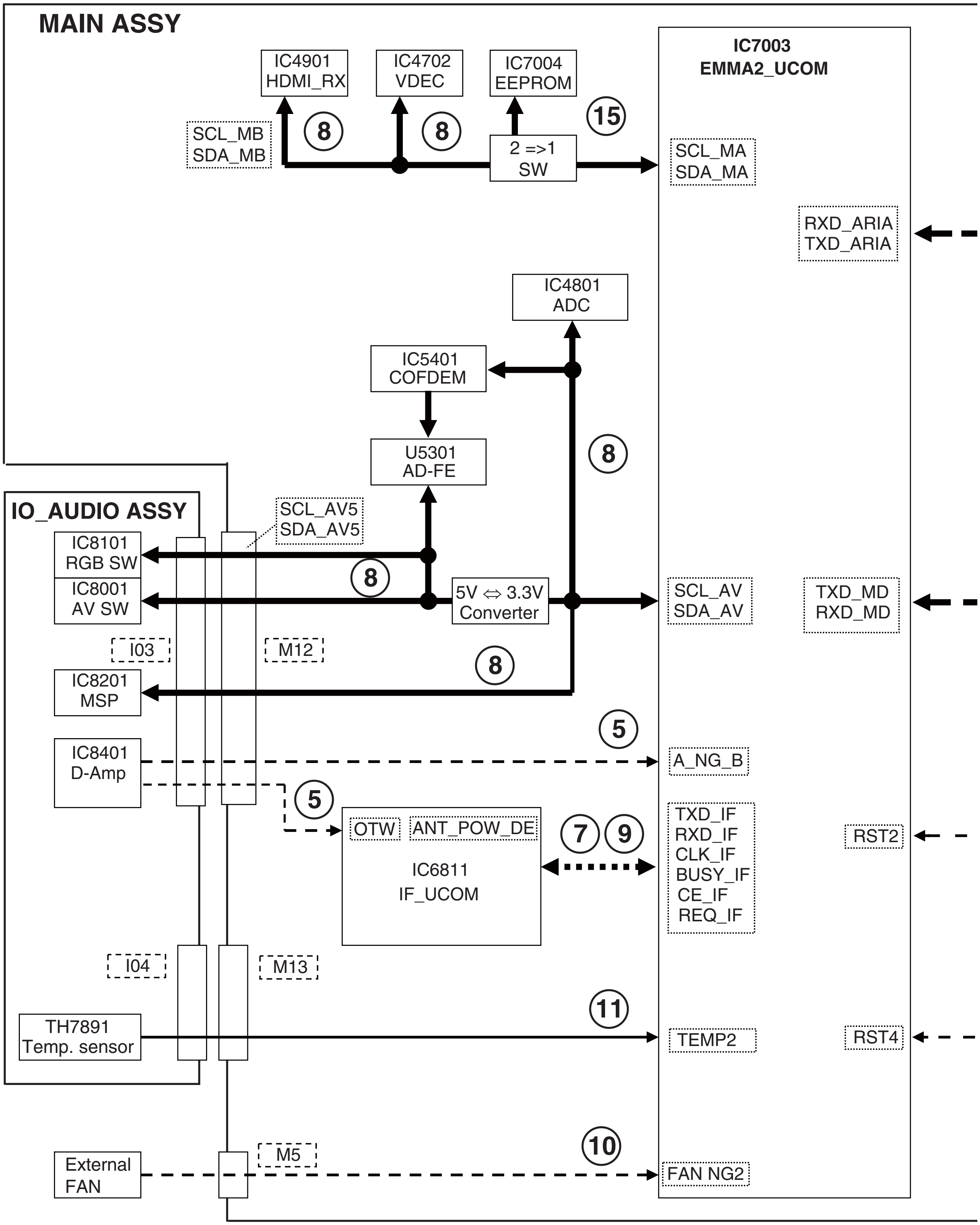
[2] PD (POWER-DOWN) DIAGNOSIS OF FAILURE ANALYSIS

Red LED Flashing Count	Factory History Display	Defective Assy	PD Outline	Checkpoint
2	P-PWR	POWER SUPPLY Unit	Each PD in the POWER SUPPLY Unit	
			Connector disconnection	Connector [P14][P15] (60”only)
		X DRIVE Assy	VSUS under voltage protection	X SUS block
		Y DRIVE Assy	VSUS under voltage protection	Y SUS block
		ADDRESS Assy	Connector disconnection	Connector [AD1]
		DIGITAL Assy	Connector disconnection	Connector [D13] to [D20]
3	SCAN	SCAN Assy	VH over or under voltage protection	SCAN IC
		X DRIVE Assy		X SUS block
		Y DRIVE Assy		Y SUS block
				VH DC/DC
				OFFSET block
			Connector disconnection	Connector [Y1][Y2]
		DIGITAL Assy	Connector disconnection	Connector [D21]
4	SCN5V	SCAN Assy	Connector disconnection	Connector [SA1][SB1][SB2][SC1][SC2][SD1]
			IC5V over or under voltage protection	SCAN IC
		Y DRIVE Assy		IC5V DC/DC
6	Y-DCDC	Y DRIVE Assy	VNOFS under voltage protection	Y MSK block
				NOFS block
				VNOFS DC/DC
			VYPRST under voltage protection	VPRST regulaotr
				PR-U block
			15VDD under voltage protection	15V DC/DC
				SOFT-G block
			VKOFS1,2 under voltage protection	Y MSK block
				KNOFS2 block
				VYKOFS1, 2 regulaotr
			VKOFS3 under voltage protection	Y MSK block
				VYKOFS3 regulaotr
			VKOFS4 under voltage protection	Y MSK block
				KNOFS4 block
				VYKOFS4 regulaotr
7	Y-SUS	Y DRIVE Assy	Over or under voltage protection of the center electric potential	Y resonance block
		DIGITAL Assy	SQ_LSI does not operate	SEQ_LSI (Sync input, output waveform)
8	ADRS	ADDRESS Assy	VADR under voltage protection	Address resonance block
				TCP
			Connector disconnection	Connector [AD1][AD2]
		DIGITAL Assy	Connector disconnection	Connector [D13] to [D20]
		Y DRIVE Assy	Connector disconnection	Connector [Y2][Y5][Y6]
		X DRIVE Assy	Connector disconnection	Connector [X2][X3][X4]
		POWER SUPPLY Unit	Connector disconnection	Connector [P1][P2]
10	X-DCDC	X DRIVE Assy	Connector disconnection	Connector [X2]
			15VDD under voltage protection	X SUS block
				15V DC/DC
			VXKOFS1 under voltage protection	VXKOFS1 regulaotr
				X OFFSET block
			VXKOFS2 under voltage protection	VXKOFS2 regulaotr
				X OFFSET block
11	X-SUS	X DRIVE Assy	Over or under voltage protection of the center electric potential	X resonance block
12	D-DCDC	DIGITAL Assy	3.3V,2.5V,1.1V Over voltage/under voltage/overcurrent protection	DC/DC controlo IC
				DC/DC block
15	UNKNOW	POWER SUPPLY Unit	Connector disconnection	Connector [P4]
		DIGITAL Assy	Connector disconnection	Connector [D23]
			ModuleUcom can not detection	Each PD line of ModuleUcom

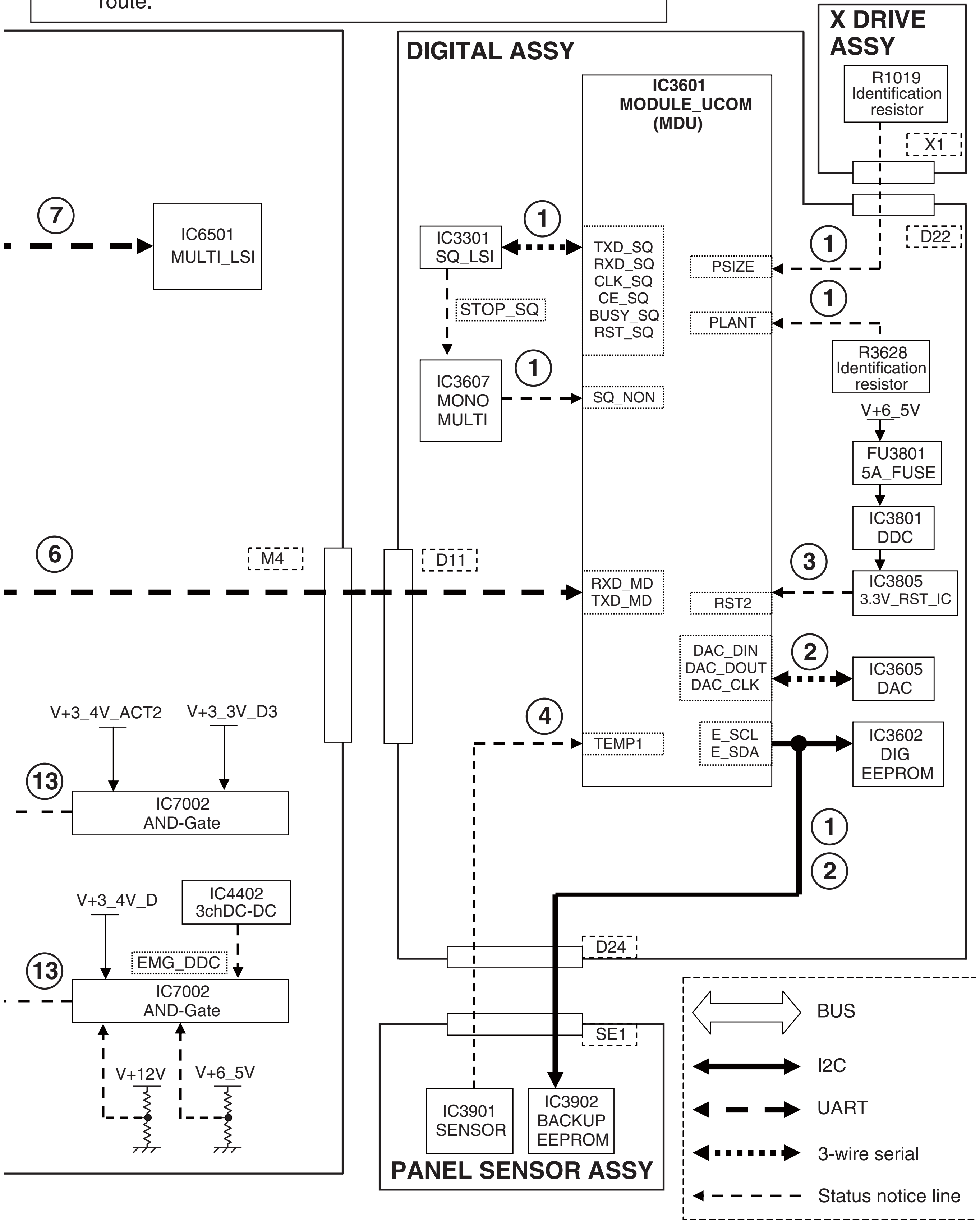
Possible Defective Part	Remarks
	The POWER SUPPLY Unit of 60 inches model is a structure of the two parts.
Q1218,Q1219,Q1221-Q1223,Q1226	VSUS-SUSOUT and SUSOUT-SUSGND are short-circuited.
Q2217-Q2224	VSUS-SUSOUT and SUSOUT-SUSGND are short-circuited.
each SCAN IC	The abnormality of the SCAN IC
Q1218,Q1219,Q1221-Q1223,Q1226	VSUS-SUSOUT and SUSOUT-SUSGND are short-circuited.
Q2217-Q2219,Q2221-Q2223	VSUS-SUSOUT and SUSOUT-SUSGND are short-circuited.
IC2601,IC2603,IC2604	
Q2401,Q2402	KNOFS1 and KNOFS3 are short-circuited.
	[SB2][SC1][SC2][SD1] are 60 inches model only.
each SCAN IC	
Q2764,D2768,R2764	
Q2321-Q2326,Q2328-Q2331,Q2333,Q2334	L MSK is short-circuited.
Q2424,Q2429	NOFS is short-circuited.
D2606,Q2709-Q2711	
Q2604,Q2605,IC2602	
Q2418	PR-U is short-circuited.
Q2662,R2669,L2301,R2335	
Q2427	SOFT-G is short-circuited.
Q2321-Q2326,Q2328-Q2331,Q2333,Q2334	L MSK is short-circuited.
Q2430	KNOFS2 is short-circuited.
Q2702,Q2705,R2714	
Q2321-Q2326,Q2328-Q2331,Q2333,Q2334	L MSK is short-circuited.
Q2703,Q2706,R2715	
Q2321-Q2326,Q2328-Q2331,Q2333,Q2334	L MSK is short-circuited.
Q2432	KNOFS4 is short-circuited.
Q2704,Q2707,R2717	
Q2106-Q2109,Q2111,Q2113,D2104-D2107	
IC3301,IC3302	The history of SD1 remains
Q1711,Q1721,Q1731,Q1741,Q1911,Q1921,Q1931,D1711,D1721,D1731,D1741,D1911,D1921,D1931	
TCP (IC1651,IC1661,IC1671,IC1681,IC1851,IC1861,IC1871)	When the TCP is damaged, replace the panel.
	Ref No. of L Assy (6 pieces) and S Assy (2 pieces) are common use.
L1201,R1217	
Q1402	
Q1405,Q1406	
Q1302,Q1304	
Q1403,Q1404	
Q1301,Q1303	
Q1108,Q1112,Q1116,Q1119	
IC3801	
Q3841,Q3861,Q3881,L3841,L3861,L3881 R3820,R3848,R3868,R3888	
	EXT_PD line : Open
	EXT_PD line : Open
	It becomes "UNKNOW" except above-mentioned PD detection condition.

5.4 DIAGNOSIS OF SD (SHUTDOWN)

[1] BLOCK DIAGRAM OF THE SHUTDOWN SIGNAL


MAIN ASSY
IC4901
HDMI_RX
IC4702
VDEC
IC7004
EEPROM
IC7003
EMMA2_UCOM
SCL_MB
SDA_MB
⑧
⑧
2 =>1
SW
⑮
SCL_MA
SDA_MA
RXD_ARIA
TXD_ARIA
IC4801
ADC
IC5401
COFDEM
U5301
AD-FE
⑧
IO_AUDIO ASSY
SCL_AV5
SDA_AV5
IC8101
RGB SW
IC8001
AV SW
⑧
5V ⇔ 3.3V
Converter
SCL_AV
SDA_AV
TXD_MD
RXD_MD
I03
M12
IC8201
MSP
⑧
⑤
IC8401
D-Amp
A_NG_B
⑤
OTW
ANT_POW_DE
IC6811
IF_UCOM
⑦
⑨
TXD_IF
RXD_IF
CLK_IF
BUSY_IF
CE_IF
REQ_IF
RST2
I04
M13
⑪
TH7891
Temp. sensor
TEMP2
RST4
M5
⑩
External
FAN
FAN NG2

Note : The figures ① to ⑮ indicate the number of times the Blue LED flashes when shut-down occurs in the corresponding route.


DIGITAL ASSY
X DRIVE ASSY
R1019
Identification resistor
X1
D22
IC3601
MODULE_UCOM
(MDU)
⑦
IC6501
MULTI_LSI
IC3301
SQ_LSI
①
TXD_SQ
RXD_SQ
CLK_SQ
CE_SQ
BUSY_SQ
RST_SQ
STOP_SQ
IC3607
MONO
MULTI
①
SQ_NON
PSIZE
①
PLANT
①
R3628
Identification resistor
V+6_5V
FU3801
5A_FUSE
IC3801
DDC
⑥
M4
D11
RXD_MD
TXD_MD
RST2
③
IC3805
3.3V_RST_IC
DAC_DIN
DAC_DOUT
DAC_CLK
②
IC3605
DAC
V+3_4V_ACT2
V+3_3V_D3
④
TEMP1
E_SCL
E_SDA
IC3602
DIG
EEPROM
⑬
IC7002
AND-Gate
①
②
V+3_4V_D
IC4402
3chDC-DC
EMG_DDC
⑬
IC7002
AND-Gate
D24
V+12V
V+6_5V
SE1
IC3901
SENSOR
IC3902
BACKUP
EEPROM
PANEL SENSOR ASSY
BUS
I2C
UART
3-wire serial
Status notice line

[2] SD (SHUTDOWN) DIAGNOSIS

Frequency of LED Flashing (*1)		Major Type	Detailed Type	Log Indication in Factory Mode	
				MAIN	SUB
Blue 1	Orange 1	Abnormality in the Sequence LSI	Communication error	SQ-LSI	RTRY
	Orange 2		Drive stop		SQNO
	Orange 3		Busy		BUSY
	Orange 4		Version mismatching (hardware, software)		VER-HS
	Orange 5		Version mismatching (hardware, backup memory)		VER-HM
	Orange 6		Version mismatching (hardware, DIGITAL memory)		VER-HI
Blue 2	Orange 1	Failure in MDU device communication	Digital EEPROM	MD-DEV	EEPROM
	Orange 2		Backup EEPROM		BACKUP
	Orange 3		DAC IC		DAC
Blue 3	–	Abnormality in RST2 power decrease	–	RST2	–
Blue 4	Orange 1	Abnormality in panel temperature	Abnormality in high temperature	TMP-NG	TMP-H
	Orange 2		Abnormality in low temperature		TMP-L
Blue 5	–	Short-circuiting of the speakers D-AMP temperature abnormality	–	AUDIO	–
	–				
	–				
Blue 6	–	Failure in communication with the module microcomputer	–	MODULE	–
Blue 7	Orange 1	Failure in IF microcomputer 3-wire serial communication	IF microcomputer	MA-3L	IF
	Orange 2		MULTI		MULTI
Blue 8	Orange 1	Failure in IIC communication with the main microcomputer	Tuner 1	MA-IIC	FE1
	Orange 2		MSP/MAP		MSPMAP
	Orange 3		AV switch		AV-SW
	Orange 4		RGB switch		RGB-SW
	Orange 5		Main VDEC		VDEC
	Orange 6		VDEC SDRAM		SDRAM
	Orange 7		AD/PLL		ADC
	Orange 8		HDMI		HDMI
	Orange 13		COFDEM		DEMOD
Blue 9	–	Failure in communication with the main microcomputer	–	MAIN	–
Blue 10	Orange 2	Abnormality in FAN	FAN2	FAN	FAN2
Blue 11	–	High temperature of the unit	–	TEMP2	–
Blue 12	Orange 1	Digital Tuner	DTV startup error	DTUNER	PS/RST
Blue 13	Orange 1	Failure in the power supply	DC-DC Converter power decrease	RST-MA	M-DCDC
	Orange 2		POWER SUPPLY		RELAY
Blue 15	–	Main EEPROM	Main EEPROM communication error	MA-EEP	–
–	–	Digital Tuner	DTV Antenna	DTUNER	D-ANT

*1: If the DISPLAY key is pressed during shutdown (the blue LED is flashing), flashing of the orange LED, which indicates the subcategory, can be confirmed. The blue LED remains flashing. Pressing the DISPLAY key again will make the orange LED go dark.

Checkpoint	Possible Defective Part	Remarks
Communication line between MDU and SQ_LSI	IC3601/IC3301	SQ_IC communication not established. IC3301 may not have properly started up.
Drive detectig signal of MDU (SQ_NON)	CN3201/IC3601/ IC3301/IC3607	A shutdown occurs if the drive waveform periodically does not output. (When SQ_NON of MDU input is High, a shutdown is generated.)
Communication line between MDU and SQ_LSI (BUSY_SQ)	IC3601/IC3301	If BUSY_SQ remains high, a shutdown is generated.
Check the DIGITAL Assy and the software version of SEQ and the destination of the panel. Check the connection between [X1] and [D22].	IC3601/IC3301	When the identification resistor of PSIZE/PLANT and software version of SEQ are incoherent, a shutdown occurs.
Check the DIGITAL Assy and the software version of SEQ and the destination of the panel. Check the connections between [X1] and [D22], and [SE1] and [D24]. Communication line between MDU and BACKUP EEPROM	IC3601/ SENSOR Assy(IC3902)	When the identification resistor of PSIZE/PLANT and stored content of EEPROM on the SENSOR Assy are incoherent, a shutdown occurs.
Check the DIGITAL Assy and the software version of SEQ and the destination of the panel. Check the connections between [X1] and [D22]. Communication line between MDU and DIG EEPROM	IC3601/IC3602	When the identification resistor of PSIZE/PLANT and stored content of EEPROM on the DIGITAL Assy are incoherent, a shutdown occurs.
Communication line between MDU and DIG EEPROM	IC3601/IC3602	
Communication line between MDU and BACKUP EEPROM	IC3601/SENSOR Assy(IC3902)	
Communication line between MDU and DAC	IC3601/IC3605	
3.3 V output (TP3881) of DDC	IC3801/IC3805	If RST2 does not become high after the unit is turned on, a shutdown will be generated in several seconds.
V+6.5V of POWER SUPPLY Unit (Check [D25][P4]) FU3801 has melted.	POWER SUPPLY Unit, FU3801	Check if V + 6_5 V is started. Also check if the FU3801 on the DIGITAL Assy has been melted.
Installation environment	SENSOR Assy (IC3901)	If TEMP1 that is read by the module microcomputer is 85 °C or higher, a shutdown will be generated.
Installation environment Check the connection between SE1 and D24.	SENSOR Assy (IC3901)	A shutdown occurs if the reading of TEMP1 detected by the module microcomputer is –20 °C or less. Also check the connection between SE1 and D24.
Speaker terminals	JA8551	Check if any speaker cable is in contact with the chassis.
D_AMP	IC8401	Check if the AMP output is short-circuited. Check the temperature that is 125 °C or less.
Periphery of the cable between IO3 and M12, and IO4 and M13	CN7503,CN7504, CN4003,CN4004	Check if cables are firmly connected.
Communication line between MAIN and MOD	IC7003	Check the communication lines (TXD_MOD/RXD_MOD).
Periphery of the cable between D11 and M12	CN4101,CN4105	Check if cables are firmly connected.
Communication line between IF and MAIN	IC7003,IC6501	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF).
Communication line between MULTI and MAIN	IC7003,IC6501	Check the communication lines (TXD_ARIA/RXD_ARIA).
IIC communication line between Tuner and MAIN	U5301,IC7003	Check the communication lines (SCL_TU/SDA_TU or SCL_AV/SDA_AV).
IIC communication line between MSP/MAP and MAIN	IC8201,IC7003	Check the communication lines (SCL_AV/SDA_AV).
IIC communication line between AV-SW and MAIN	IC8001,IC7003	Check the communication lines (SCL_AV5/SDA_AV5).
IIC communication line between RGB_SW and MAIN	IC8101,IC7003	Check the communication lines (SCL_AV5/SDA_AV5).
IIC communication line between M_VDEC and MAIN	IC4702,IC7003	Check the communication lines (SCL_MB/SDA_MB).
IIC communication line between VDEC and SDRAM	IC4702,IC4802	Check the communication lines (SDRAM). Defective SDRAM
IIC communication line between ADC and MAIN	IC4801,IC7003	Check the communication lines (SCL_AV/SDA_AV).
IIC communication line between HDMI_RX and MAIN	IC4901,IC7003	Check the communication lines (SCL_MB/SDA_MB).
IIC communication line between COFDEM and MAIN	IC5401,IC7003	Check the communication lines (SCL_AV/SDA_AV).
Communication line between IF and MAIN	IC6811,IC7003	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF).
Dirt attached to the fan motor		Check the fan. (SD10 does not detect it at the temperature that fans do not turn.)
Periphery of the FAN CONNECT Assy		FAN NG
Periphery of the cable between FA1 and FA3		Check if cables are firmly connected.
Periphery of the fan control regulator	IC4303	Check that the voltage outputs it.
Ambient temperature		TEMP2 A shutdown occurs because of high temperature.
Temperature sensor or its periphery	TH7891	TEMP2
Periphery of the cable between IO4 and M13	CN7504,CN4004	Check if cables are firmly connected.
Startup of BCM7404	IC6001	Check the startup of the BCM7404 and the communication line with MAIN.
RST2 V+3_4V_ACT2, V+3_3V_D3	IC7002	Check if each voltages are started.
RST4 V+12V, V+6_5V, V+5_1V, V+3_4V_D	IC7002	Check if each voltages are started.
RST4 V+12V, V+6_5V, V+5_1V, V+3_4V_D	POWER SUPPLY Unit	Check if each voltages are started.
Check the cables M2 and M3.	CN4207, CN4210	Check if cables are firmly connected.
IIC communication line between EEPROM and MAIN	IC7004, IC7003	Check the communcation lines (SCL_EP/SDA_EP)
Antenna supply power	IC4304	Check the IC4304 and periphery device.

5.5 NON-FAILURE INFORMATION

[1] INFORMATION ON SYMPTOMS THAT DO NOT CONSTITUTE FAILURE

Symptom	Cause, item to check, information
HDMI: Symptoms concerning the input format and settings	
The picture color for an INPUT 1 or 3 or 4 signal is not correct.	The color setting for INPUT 1 or 3 or 4 is not compatible with that of the output equipment. Check whether the color setting is YPbPr or RGB.
The video signal to INPUT 1 or 3 or 4 is not displayed, and a message is displayed.	A unsupported video signal is input.
The audio signal input to the INPUT 1 or 3 is not output. No HDMI signal is input.	The audio setting for INPUT 1 or 3 is any setting, and a video signal is not input. If the audio setting is any setting, to output an analog audio signal, the HDMI signal must be input. (If a DVI device is to be connected, use a DVI-HDMI conversion cable.) If the HDMI video signal is not input, the analog audio signal is not output.
No sound of signals to INPUT 1 or 3 or 4 is output.	The setting on the side of the HDMI output equipment is wrong. Example: Dolby Digital
The 1080p input signal is not displayed properly or at all, although the 1080i input signal is displayed properly.	Check that the connected cable supports HDMI Category 2. (As the clock frequency for the 1080p signal is triple that for the 1080i signal, signal degradation caused by a cable must not be neglected. A cable supporting HDMI Category 2 can be used for the 1080p signal. Although some conventional cables can support the 1080p signal, some others cannot.)
SCART video output	
The video output signal from the SCART connector is deteriorated. Or when the video output signal from the SCART connector is recorded, its playback picture is deteriorated.	The video signal output from the SCART connector is Macrovision protected.
The video signal is not output when the component signal is input to INPUT 2.	The video signal is not output from the SCART connector when the component signal is selected.
The video signal is not output when the video signal is input to INPUT 1 or 3 or 4.	The video signal is not output from the SCART connector when the HDMI signal is selected.
AUDIO OUT and SCART	
The image displayed on the PDP is not synchronized with the sound from the SCART.	The audio signal from the SCART connector is synchronized with the video output signal from the SCART connector. And the audio signal from the AUDIO OUT is synchronized with the video signal that is currently displayed.
DIGITAL OUT	
Playback of the signal from the DIGITAL audio output connector is possible, but recording is not possible.	The video signal output from the DIGITAL connector is copy-protected.
The digital audio output signal from the DIGITAL connector is not synchronized with that from the SCART video output.	The digital audio output signal from the DIGITAL connector is synchronized with the video signal that is currently displayed, and not with the SCART video output.
Miscellaneous	
The no-signal off function is not activated.	The no-signal off and no-operation off functions are effective only if video (composite, S video, component, HDMI [excluding PC]) input or TV input is selected.
The no-operation off function is not activated.	
Power management does not function.	Power Management is effective only while an analog PC signal is being input. It is not effective with HDMI-PC signal input.
The AUTO SETUP function is not activated.	The Auto Setup function is effective only while an analog PC signal is being input. This function does not work if an analog PC signal is not input, even if the INPUT PC is selected.
Control via the SR connector is not possible.	Wrong connection of the cable to the PC INPUT (AUDIO) connector is suspected.
The audio signal from the PC is not output.	Wrong connection of the cable to the SR connector is suspected.
The picture-quality setting (AV Selection) is not stored.	The picture-quality setting is stored for each input. As the setting is changed when another input is selected, the user may have a false idea that the setting is not stored.
The picture size changes arbitrary.	The Auto Size setting is set to ON.
The display position of the screen changes slightly while the screen is on.	The orbiter function for minimizing the effects of phosphor burn is activated. Although the setting for this function can be changed on the Home menu, retaining the factory setting is strongly recommended.
The video signal to the S video connector is not displayed.	As the signal input to the connector that has been selected on the INPUT SELECT submenu of the Home menu is selected (this does not apply to the connectors located on the side of the unit), check the menu setting. If the output signal is not available even if the input signal is properly selected, input a signal to other input functions, check the connecting cables, or check the settings for the connected equipment.
The video signal to the composite video connector is not displayed.	

SUPPLEMENT: On the video setting for HDMI

There are three types of HDMI output formats: color difference 4:4:4, color difference 4:2:2, and RGB4:4:4.
(The proportions, such as 4:4:4 and 4:2:2, represent those of the amount of data for video signal components. For example, as for color difference 4:4:4, the proportion of the amount of data as for Y, Cb, and Cr is 4:4:4.)

It is required to make the settings of the PDP according to the settings of the output equipment. For usual operation, however, set them to AUTO. If the color is inappropriate, make the settings manually.
In the HDMI system, video signals are coded at 24 bits per pixel and transmitted as a series of 24-bit pixels. In a case of color difference 4:4:4, Y, Cb, and Cr use 8 bits each. In a case of color difference 4:2:2, Y, Cb, and Cr use 12 bits each, but Cb and Cr are transmitted at a half sampling rate of Y. This unit is capable of processing the upper 10 bits out of 12 bits of video data. Recent high-end DVD players, such as Pioneer DV-79AVi, are capable of outputting 10-bit color-difference signals. In general, it is said that picture quality for color difference 4:2:2 format is assumed to be higher, because human eyes are more sensitive to luminance than to colors. In the case of RGB4:4:4, R, G, and B use 8 bits each.

[2] FUNCTION OF DECREASING THE BRIGHTNESS LEVEL

If the panel temperature becomes high or a video signal that requires activation of panel protection is input, the unit will protect the panel by decreasing the brightness level.
* While a mask is being displayed, the panel protection function will not be activated.

Protection Function Name	Purpose	Conditions	Protection Function	Remarks
High-temperature protection function 1	For protection of parts (DCF)	Panel temperature (TEMP1) reaches 65 °C.	Offsetting the ABL adjustment value	
High-temperature protection function 2	For reducing heating in the unit	Panel temperature (TEMP1) reaches 80 °C.	Limiting for the maximum number of SUS pulses	
Panel protection function 1	For preventing burn-in	A still image is displayed for 3 minutes or more.	Limiting for the maximum number of SUS pulses	The picture will be considered to be still if only the mouse cursor is moved.
Panel protection function 2	For protection of SCAN ICs	An image with which a particular load is applied to one SCAN IC is displayed. (See Fig. 2)	Limiting for the maximum number of SUS pulses	
Panel protection function 3	For protection against panel cracking	An image with which the heat of part in the panel is increased is displayed. (See Fig. 3)	Limiting for the maximum number of SUS pulses	

■ Limiting for the maximum number of SUS pulses

By gradually decreasing the limit for the maximum number of SUS pulses, the temperature of the panel will be lowered.

- The limit for the maximum number of SUS pulses will be decreased by 8 per 5 seconds.
- The lower limit for the maximum number of SUS pulses is about 700.
- The maximum number of SUS pulses will begin to increase gradually if the conditions that led to activation of the protection function return to normal.

■ ABL adjustment value offset

By gradually offsetting the ABL adjustment value, the temperature of the panel will be lowered. The number of SUS pulses, which is determined based on the input APL (average picture level), will be decreased.

- The ABL adjustment value will be offset by one step per 30 seconds.
- The ABL adjustment value will be gradually restored if conditions that let to activation of the protection function return to normal.

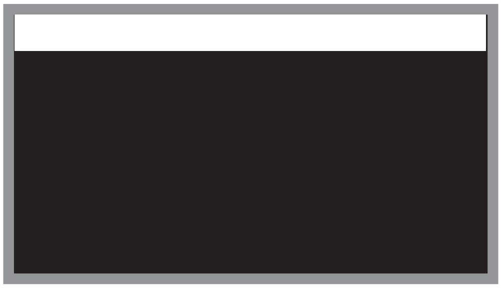


Fig. 2: Detection example: SCAN IC protection

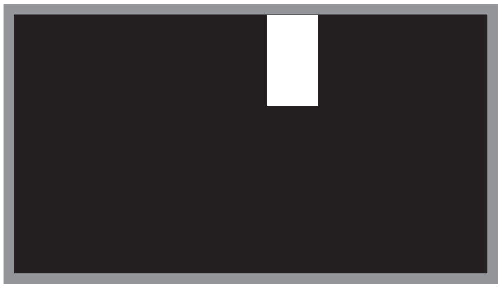


Fig. 3: Detection example: Protection against panel cracking

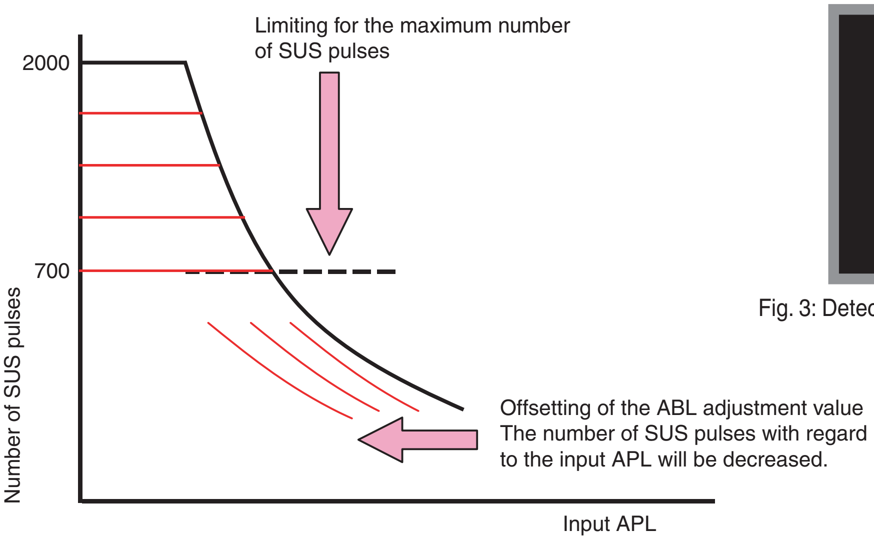


Fig. 1: Relationship between input APL and number of SUS pulses

5.6 OUTLINE OF THE OPERATION

[1] PANEL DRIVE-POWER ON/OFF FUNCTION

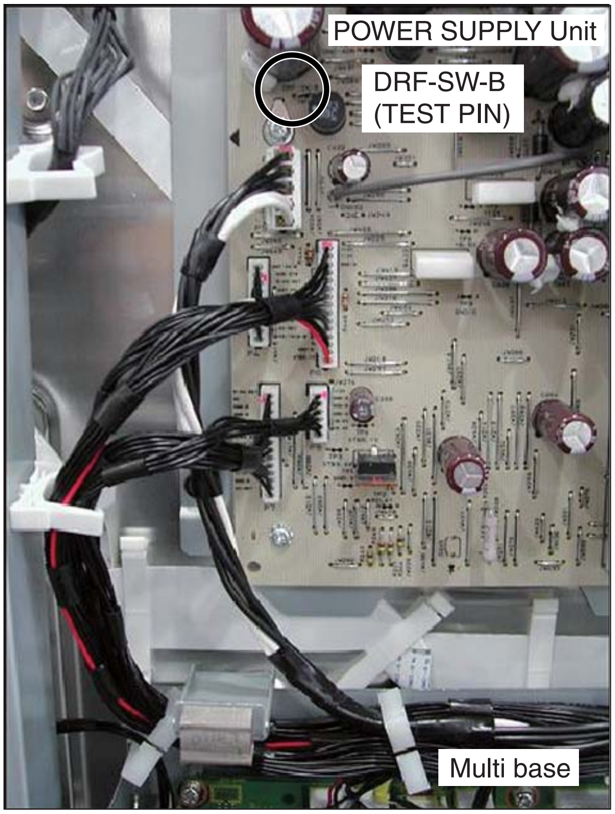
Function:
It is an operational mode where the digital signal processing performs circuit operation but the power is not supplied to the panel driving system (Vsus, VAddress) in order to avoid a power down (PD).

Application:
1. When it is necessary to check whether the signal output is correctly reaching the drive system in a repairing activity etc.
2. In the case of a PD, to determine whether the problem is with the panel drive-power supply or with the other system power supply.

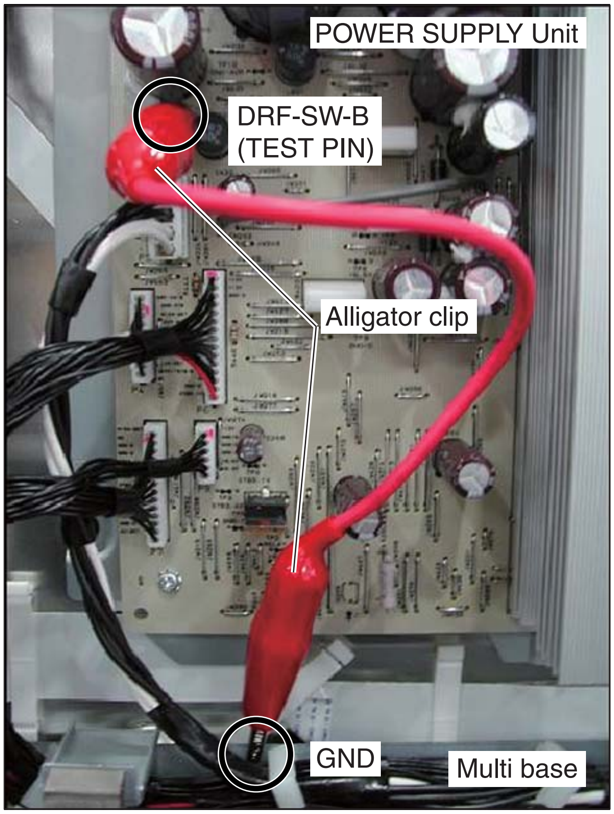
Method:
1. Short-circuit between the specified location of the POWER SUPPLY Unit and GND (Multi base section recommended), using a jumper with alligator clips (refer to the photos below).
2. Execute [DRV S00] by RS-232C command. ([DRV S01] for release)

Supplemental explanation:
- When the panel drive-power is in OFF state, there will be no PD, except PS_PD, as the PD signal has been muted.
- If the clip is removed in the OFF state of the panel drive-power, PD will take place at the instance of clip removal. Therefore, be sure to remove the clip after turning the power OFF.
- Under RS-232C command control, [DRV S01] (release) is possible during power ON. However, there is a possibility of damaging the set. Therefore, make this operation only after turning the power OFF.
- Command [DRV S00/S01] is effective even during standby.
- Setting with RS-232C commands or the remote control unit is enabled during Standby mode. However, if the unit is left unoperated for about 10 seconds in Standby mode after setting with RS-232C commands or the remote control unit is completed, the setting will become void.
- When the main power switch is set to OFF, no command is accepted.
- Setting with RS-232C commands or the remote control unit will become void if the AC power cord is unplugged, the main power switch is set to OFF, or the unit is left unoperated for about 10 seconds in Standby mode.

When the panel drive-power is ON



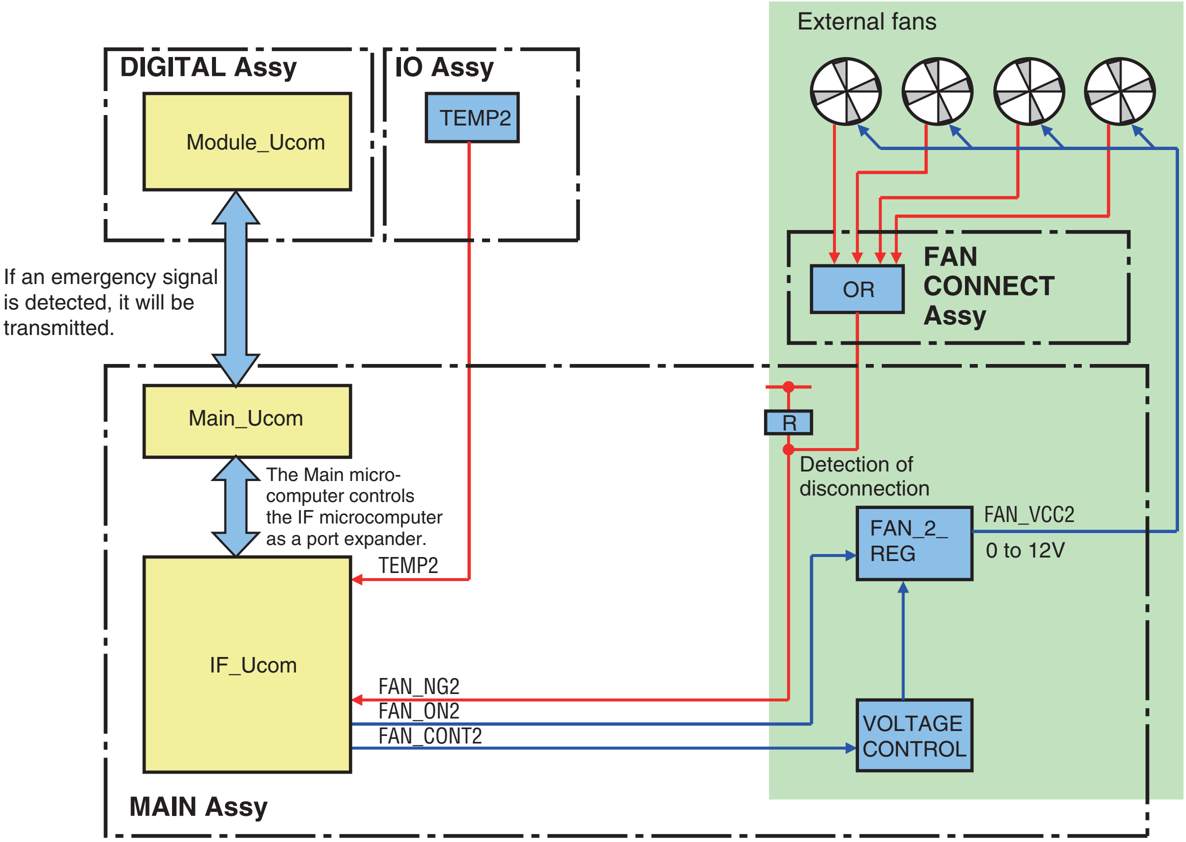
When the panel drive-power is OFF



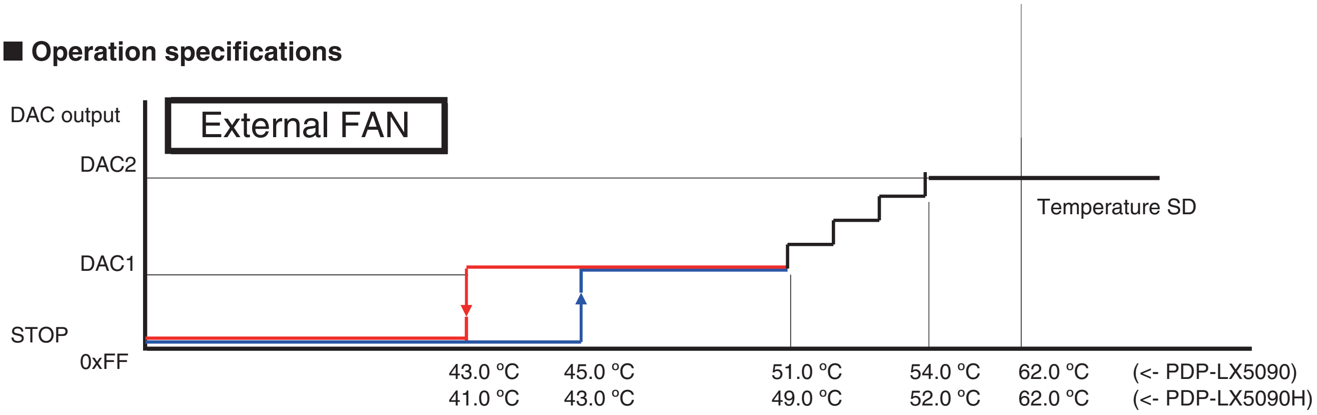
[2] SPECIFICATION OF THE FAN CONTROL

■ Block diagram

The external fans cool down the whole unit.


External fans
DIGITAL Assy
Module_Ucom
IO Assy
TEMP2
If an emergency signal is detected, it will be transmitted.
FAN CONNECT Assy
OR
R
Detection of disconnection
Main_Ucom
The Main micro-computer controls the IF microcomputer as a port expander.
TEMP2
FAN_2_ REG
FAN_VCC2
0 to 12V
IF_Ucom
FAN_NG2
FAN_ON2
FAN_CONT2
VOLTAGE CONTROL
MAIN Assy

■ Operation specifications



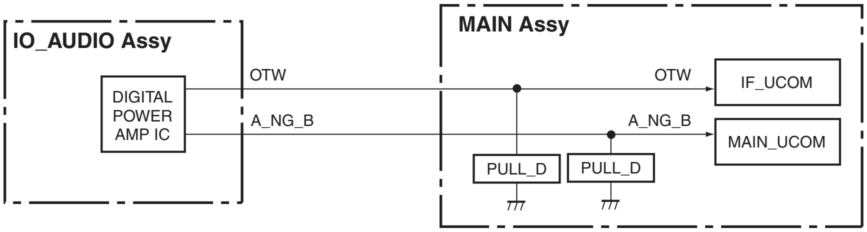
Notes:

- The operating temperature of the fan is higher than the ambient temperature, because the sensor temperature is read by the microcomputer.
- If the critical values for signals are displayed in the address circuit, the fan may be activated or be rotated at higher speed in response to values lower than the set temperature values shown above.
- When the temperature rises, the sensor voltage of TEMP2 decreases.
- When the voltage of the DAC output for external FAN decreases, rotation speed of FAN rises.

[3] PROCESSING IN ABNORMALITY

Speaker short-circuit

● Circuit configuration



● Specifications for port monitoring

Port Name	SD/PD Indication	Active	Monitoring conditions	Operation
A_NG_B	AUDIO	Shutdown occurs when the signal is "L." 30 mS ∗ 10 times	RST4 = "H" (always) (Monitoring starts 2 sec after the above conditions are established.)	The main CPU operations described below will be performed when either "A_NG_B = L" or "OTW = L" is detected (established) under the monitoring conditions.
OTW	AUDIO	Shutdown occurs when the signal is "L." 120 mS ∗ 3 times		

● Operation specifications of the main CPU

(1) Establish the short-circuit of the speaker by the main CPU
- After a warning indication is displayed for 5 sec, a shutdown is generated (the blue LED flashes 5 times).
- A warning indication is displayed for all input-signal types.
- Example of a warning indication: "The speaker terminals are short-circuited. After reconnection, turn the unit on again."

(2) Display conditions
When the panel is on: A warning indication is displayed immediately.
When the panel is off: A warning indication is not displayed immediately but is displayed when the panel is turned on.

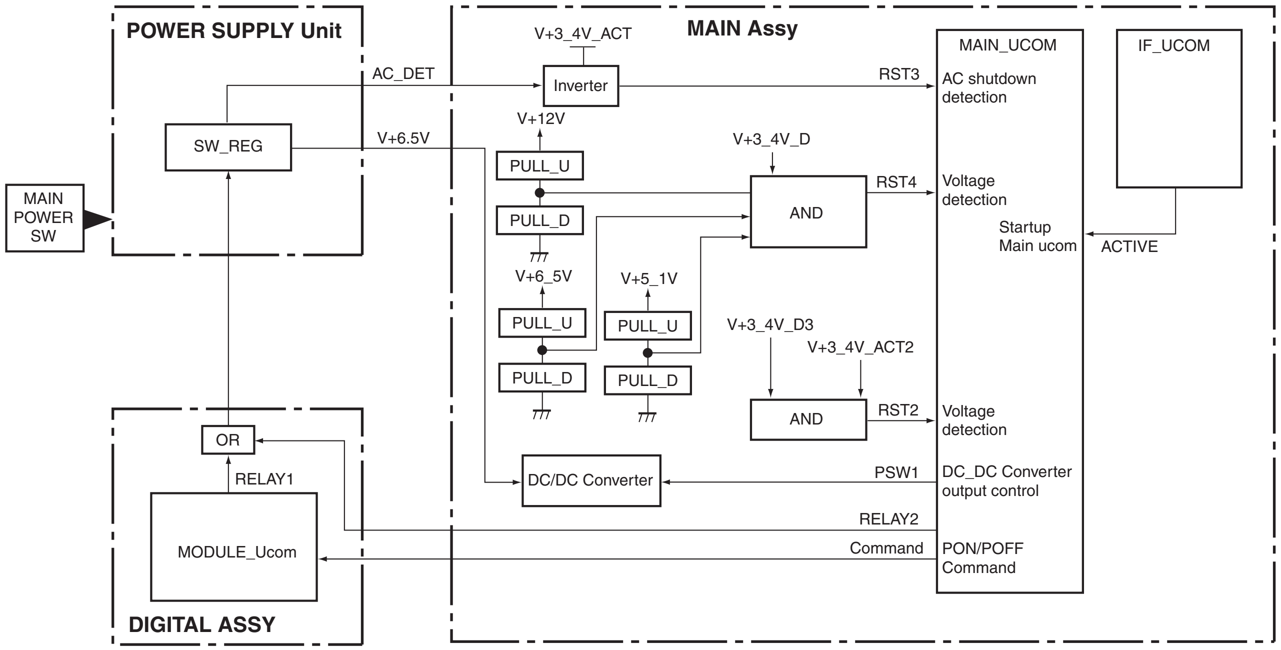
Note: A warning indication is displayed each time the panel is turned on if the conditions for a shutdown persist.

● Conditions for resetting the circuits

The circuits will be reset upon Standby ON/OFF.

Power supply and DC-DC converter

● Circuit configuration

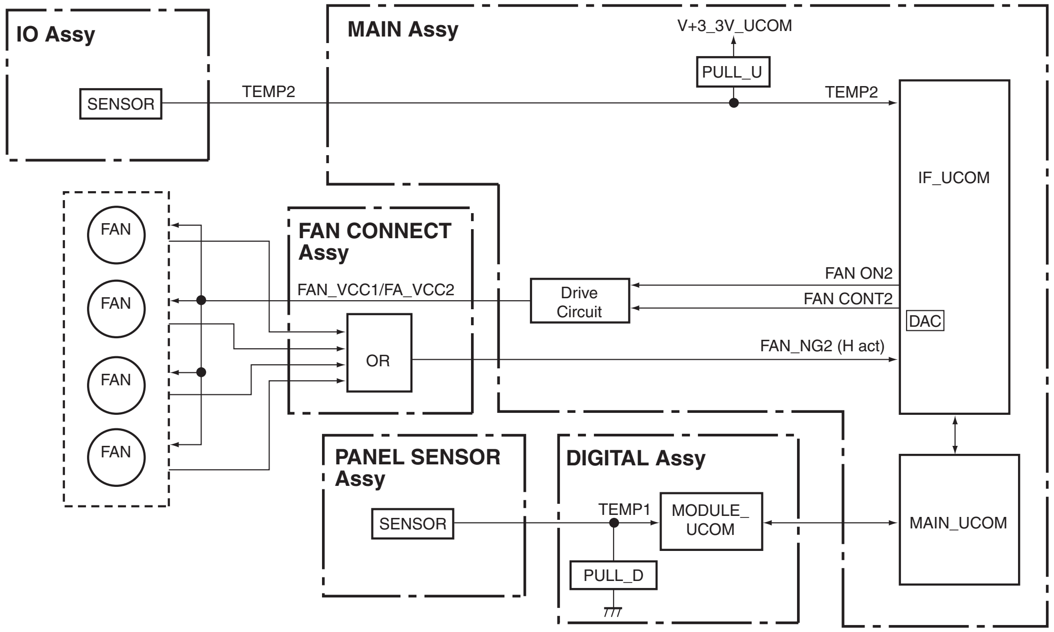

POWER SUPPLY Unit
MAIN Assy
MAIN POWER SW
SW_REG
AC_DET
V+6.5V
V+3_4V_ACT
Inverter
RST3
V+12V
PULL_U
PULL_D
V+3_4V_D
AND
RST4
V+6_5V
V+5_1V
PULL_U
PULL_D
PULL_U
PULL_D
V+3_4V_D3
V+3_4V_ACT2
AND
RST2
OR
RELAY1
MODULE_Ucom
DC/DC Converter
PSW1
RELAY2
Command
DIGITAL ASSY
MAIN_UCOM
AC shutdown detection
Voltage detection
Startup Main ucom
Voltage detection
DC_DC Converter output control
PON/POFF Command
IF_UCOM
ACTIVE

● Specifications for port monitoring

Port Name	SD/PD Indication	Active	Monitoring conditions	Operation
RST2	ASIC power (M-DCDC)	Shutdown occurs when the signal is "L." for 5 sec after PSW1 is ON. or for 2 sec while the unit is ON.	• Panel screen ON (RST4 = H and PSW1 = H) • While awaiting restoration of RST2 (RST2 = L)	Shutdown occurs immediately Blue LED flashes 13 times
RST3	AC power	AC_OFF when the signal is "H."	Excepting passive standby	If "RST3 = H" (AC_OFF) is detected under the monitoring conditions, a power-off process starts. Monitoring of the RST3 port is continued, while monitoring of other ports is interrupted. Communication is controlled only by the IF microcomputer. The port outputs are set as specified. If the signal at the RST3 port continues to be H after 30 mS of waiting, monitoring is continued. If RST3 is L, a restoration process starts according to the latest power-on/-off status.
RST4	MAIN power (RELAY)	Shutdown occurs if the signal is "L." for 5 sec after RELAY2 is ON. or for 2 sec while the unit is ON or in Functional STB.	RELAY2 = ON (High)	Shutdown occurs immediately Blue LED flashes 13 times

Fan and temperature sensor

● Circuit configuration

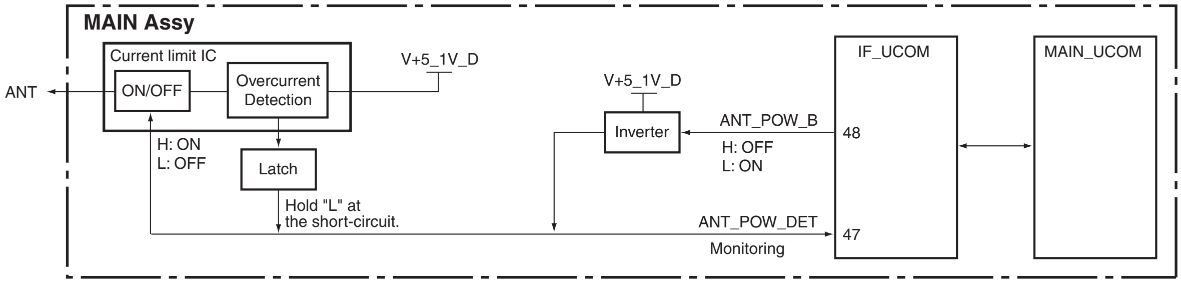

IO Assy
SENSOR
TEMP2
MAIN Assy
V+3_3V_UCOM
PULL_U
TEMP2
IF_UCOM
FAN
FAN
FAN
FAN
FAN CONNECT Assy
FAN_VCC1/FA_VCC2
Drive Circuit
FAN ON2
FAN CONT2
DAC
OR
FAN_NG2 (H act)
PANEL SENSOR Assy
SENSOR
DIGITAL Assy
TEMP1
MODULE_ UCOM
PULL_D
MAIN_UCOM

● Specifications for port monitoring

Port Name	SD/PD Indication	Active	Monitoring conditions	Operation
FAN_NG2	FAN	Shutdown occurs when the signal is "H." 1 S ∗ 3 times	RST2 = H and FAN_ON2 = H (Monitoring starts 3 sec after the above conditions are established.)	Shutdown occurs immediately Blue LED flashes 10 times
TEMP2	High temperature at MTB	Shutdown occurs if any values equal to or greater than minimum to require a shutdown are detected. 1 S ∗ 3 times	RST4 = H (Monitoring starts 1 sec after the above conditions are established.)	In the Panel screen ON: Shutdown occurs after the warning indication is displayed for 30 sec. In the Functional STB: Shutdown occurs immediately Blue LED flashes 11 times
TEMP1	Panel temperature is high	Shutdown occurs if any values equal to or greater than minimum to require a shutdown are detected. 200 mS ∗ 5 times (average)	Digital video RST2 = H	Shutdown occurs after waiting for 30 sec. Blue LED flashes 4 times
	Panel temperature is low			Shutdown occurs after waiting for 3 sec. Blue LED flashes 4 times

DTB Antenna power supply

● Circuit configuration


MAIN Assy
Current limit IC
ON/OFF
Overcurrent Detection
ANT
V+5_1V_D
H: ON
L: OFF
Latch
Hold "L" at the short-circuit.
V+5_1V_D
Inverter
ANT_POW_B
H: OFF
L: ON
ANT_POW_DET
Monitoring
IF_UCOM
48
47
MAIN_UCOM

● Specifications for port monitoring

Port Name	SD/PD Indication	Active	Monitoring conditions	Operation
ANT_POW_DET	DTB antenna short-circuited	Warning message is displayed when the signal is L (100 mS, 3 times)	RST4 = H and ANT_POW_B = L	If "ANT_POW_DET = L" is detected (established) under the monitoring conditions, an SD log is created and the warning message is displayed for 60 sec. A shutdown process is not performed in the power system.

5.7 OUTLINE OF RS-232C COMMAND

[1] PREPARED TOOLS

It is necessary to prepare the following one to use 232C command.
- PC
- Application for control
- 232C cable (straight)

∗ The setting of the Com port cannot be communicated if it doesn't do correctly.
(Please follow a set explanation of PC in the Com port)

[2] USING RS-232C COMMANDS

Individual ports are provided for RS-232C and SR+ connectors with this model. Therefore, unlike the case of previous models, which required switching of exclusive operation between these connectors on the Integrator menu, switching is no longer required.

5.8 LIST OF RS-232C COMMANDS

RS-232C commands can be used in Service Factory mode. Before using RS-232C commands, it is necessary to change the factory presetting.
See "5.7 OUTLINE OF RS-232C COMMAND".
[Note ; If you want to see version infomation (ex. QS1, QSE, Factory, Menu), Please see 10 seconds after starting.]

■ RS-232C command list

Command Name		Function	Active U-com		Last Memory	Effective only in Factory mode	Remarks
			MDU	MTB			
A							
ABL	***	Adjusting the upper limit of the power	●		MOD	●	
AMT	S00	Audio mute OFF		●			
	S01	Audio mute ON		●			
AP0	S**	ADDRESS L1, L2 setting	●		MOD	●	Note 1
AP1	S**	ADDRESS L3, L4 setting	●		MOD	●	Note 1
AP2	S**	ADDRESS U1, U2 setting	●		MOD	●	Note 1
AP3	S**	ADDRESS U3, U4 setting	●		MOD	●	Note 1
APN	***	1V average pulse number setting	●		MOD	●	
B							
BCP		Copying the backup data in the EEPROM	●		MOD	●	
BSM	S00	After image/Burning safe mode: OFF	●				
	S01	After image/Burning safe mode: ON	●				
C							
CHN	FWD	Changing tuner preset channel (1 step forward)		●			
	REV	Changing tuner preset channel (1 step reverse)		●			
CBU		Clearing backup data of EEPROM	●		MOD	●	
CHM		Clearing data of the hour meter	●	●	MOD	●	
CHR		Clearing data of the hour meter of MTB/MR side		●			Clear the hour meter of screen display of MAIN NG
CMT		Clearing data of the maximum temperature	●		MOD	●	
CNG		Clearing shutdown history of MTB/MR side		●			
CPC		Clearing power-on count data	●		MOD	●	
CPD		Clearing power-down histrory	●		MOD	●	
CPM		Clearing data of the pulse meter	●		MOD	●	
CSD		Clearing shutdown history of Panel side	●		MOD	●	
CSF	S00	Color sensor function OFF	●				
	S01	Color sensor function ON	●				
CSM	S01	Color space mode 1: Pioneer original	●				
	S02	Color space mode 2: EBU standard conformity	●				
CSB	***	Blue coefficient of color sensor	●		MOD	●	
CSG	***	Green coefficient of color sensor	●		MOD	●	
CSR	***	Red coefficient of color sensor	●		MOD	●	
CTP	S00	Color temperature switch OFF	●				
	S01	Color temperature switch LOW setting	●				
	S02	Color temperature switch MID LOW setting	●				
	S03	Color temperature switch MID setting	●				
	S04	Color temperature switch MID HIGH setting	●				
	S05	Color temperature switch HIGH setting	●				
D							
DIZ	S00	Dither/L dither OFF & noise OFF	●			●	
	S01	Dither/L dither ON & noise ON	●			●	
	S02	Dither/L dither OFF & noise ON	●			●	
	S03	Dither/L dither ON & noise OFF	●			●	
DRV	S00	Panel drive-power OFF	●				
	S01	Panel drive-power ON	●				
DW*		To subtract ∗ to the adjustment value (∗ = 0 to 9, subtract 10 with DW0 and set to minimum value with DWF)		●			

Note 1: It is necessary to turn off the power for reflecting the setting change.

Command Name		Function	Active U-com		Last Memory	Effective only in Factory mode	Remarks
			MDU	MTB			
F							
FAJ		Determining the flag of the DIGITAL Assy adjustment in "adjustment is completed"	●		MOD	●	
FAN		Factory mode OFF	●	●		●	
FAY		Factory mode ON	●	●			
FBM	S00	OFF (In-phase SUS drive prohibition)	●		MOD	●	Note 1
	S01	MODE1 (In-phase SUS drive permission)	●		MOD	●	Note 1
FST	S32	Set each memory setting of MTB/MR side to the shipment state.		●		●	PDP-LX5090H only
	S34	Set each memory setting of MTB/MR side to the shipment state.		●		●	PDP-LX5090 only
I							
INA	***	Switching the terrestrial analog signal, direct tuning (***: channel number)		●	MAIN		
		Switching the terrestrial analog signal (Channnel is in the last.)		●	MAIN		
INC	***	Switching the terrestrial digital signal, direct tuning (***:channel number)		●	MAIN		
		Switching the terrestrial digital signal (Channnel is in the last.)		●	MAIN		
IND	***	Switching the satellite digital signal, direct tuning (***:channel number)		●	MAIN		
		Switching the satellite digital signal (Channnel is in the last.)		●	MAIN		
INH	***	Switching the Home Media Gallery / Home Gallery		●			
INP	S01	Input switch: INPUT 1		●	MAIN		
	S02	Input switch: INPUT 2		●	MAIN		
	S03	Input switch: INPUT 3		●	MAIN		
	S04	Input switch: INPUT 4		●	MAIN		
	S05	Input switch: INPUT 5		●	MAIN		
	S06	Input switch: INPUT 6 (PC)		●	MAIN		
M							
MIR	S00	Mirror display mode: OFF	●				
	S01	Mirror display mode: Right and left inversion	●				
	S02	Mirror display mode: Top and bottom inversion	●				
	S03	Mirror display mode: Top and bottom and right and left inversion	●				
MKC	S00	MASK OFF	●		MOD		
	S01	H ramp (slant 1) M	●		MOD	●	
	S02	H ramp (slant 4) M	●		MOD	●	
	S03	Slanting ramp M	●		MOD	●	
	S04	30 for aging	●		MOD	●	
	S05	05 for aging	●		MOD	●	
	S06	Erasing afterimage 1	●		MOD	●	
	S07	Erasing afterimage 2	●		MOD	●	
	S08	White (change in luminance level)	●		MOD	●	
	S09	PEAK detection raster	●		MOD	●	
	S10	Address lack check	●		MOD	●	
	S11	Green vertical line scroll	●		MOD	●	
	S12	Green horizontal line scroll	●		MOD	●	
	S13	Vertical ramp vertical scroll (white)	●		MOD	●	
	S14	Vertical ramp vertical scroll (green)	●		MOD	●	
	S15	Horizontal ramp horizontal scroll (white)	●		MOD	●	
	S16	Horizontal ramp horizontal scroll (green)	●		MOD	●	
	S17	Cross hatch + window	●		MOD	●	
MKS	S00	MASK OFF	●		MOD		
	S01	H ramp (slant 1)	●		MOD	●	
	S02	H ramp (slant 4)	●		MOD	●	

Note 1: It is necessary to turn off the power for reflecting the setting change.

Command Name		Function	Active U-com		Last Memory	Effective only in Factory mode	Remarks
			MDU	MTB			
M							
MKS	S03	V ramp (slant 1)	●		MOD	●	
	S04	Slanting ramp	●		MOD	●	
	S05	Window (Hi= 870, Lo= 102)	●		MOD	●	
	S06	Window (Hi= 1023, Lo= 102)	●		MOD	●	
	S07	Window (Hi= 1023, Lo=000)	●		MOD	●	
	S08	Window (Hi= 1023) 4 %	●		MOD	●	
	S09	Window (Hi= 1023) 1.25 %	●		MOD	●	
	S10	Window (1/7 LINE)	●		MOD	●	
	S11	STRIPE (MGT/GRN)	●		MOD	●	
	S12	STRIPE (GRN/MGT)	●		MOD	●	
	S13	B & W, checker (1 line)	●		MOD	●	
	S14	B & W, checker (2 lines)	●		MOD	●	
	S15	B & W, checker (4 lines)	●		MOD	●	
	S16	B & W, checker (8 lines)	●		MOD	●	
	S17	COLOR BAR	●		MOD	●	
	S18	Slanting lines	●		MOD	●	
	S19	Red & black, checker (1 line)	●		MOD	●	
	S20	Red & black, checker (2 lines)	●		MOD	●	
	S21	Red & black, checker (4 lines)	●		MOD	●	
	S22	Red & black, checker (8 lines)	●		MOD	●	
	S23	Erasing afterimage (RGB: zigzag, V: reverse)	●		MOD	●	
	S24	Black raster (max SUS pulses)	●		MOD	●	Note 5
	S25	1 for perfect linear	●		MOD	●	
	S26	2 for perfect linear	●		MOD	●	
	S27	3 for perfect linear	●		MOD	●	
	S28	4 for perfect linear	●		MOD	●	
	S29	RGB checker 1	●		MOD	●	
	S30	RGB checker 2	●		MOD	●	
	S31	Window RED (RED=1023)	●		MOD	●	
	S32	Window GREEN (GREEN=1023)	●		MOD	●	
	S33	Window BLUE (BLUE=1023)	●		MOD	●	
	S34	Even line horizontal stripes	●		MOD	●	
	S35	Odd line horizontal stripes	●		MOD	●	
	S36	Afterimage check 1	●		MOD	●	
	S37	Afterimage check 2	●		MOD	●	
	S38	Afterimage check 3	●		MOD	●	
	S39	Afterimage check 4	●		MOD	●	
	S40	Red single-color slanting ramp	●		MOD	●	
	S41	GREEN single-color slanting ramp	●		MOD	●	
	S42	BLUE single-color slanting ramp	●		MOD	●	
	S43	For panel light check 1	●		MOD	●	
	S44	For panel light check 2	●		MOD	●	
	S45	5 for perfect linear	●		MOD	●	
	S46	6 for perfect linear	●		MOD	●	
	S47	7 for perfect linear	●		MOD	●	
	S48	8 for perfect linear	●		MOD	●	
	S49	Mask for ABL adjustment	●		MOD	●	

Note 5: Peak luminance detection function (PKD) modification is impossible.

Command Name		Function	Active U-com		Last Memory	Effective only in Factory mode	Remarks
			MDU	MTB			
MKR	S00	MASK OFF	●		MOD		
	S01	Raster - White	●		MOD	●	
	S02	Raster - Red	●		MOD	●	
	S03	Raster - Green	●		MOD	●	
	S04	Raster - Blue	●		MOD	●	
	S05	Raster - Black	●		MOD	●	
	S06	Raster - Cyan	●		MOD	●	
	S07	Raster - Magenta	●		MOD	●	
	S08	Raster - Yellow	●		MOD	●	
	S09	Raster - Pink	●		MOD	●	
	S10	Raster - Yellow egg color	●		MOD	●	
	S11	Raster - Light blue	●		MOD	●	
	S12	Raster - Beige	●		MOD	●	
	S13	Raster - Yellow green	●		MOD	●	
	S14	Raster - Cyan 120	●		MOD	●	
	S15	Raster - Magenta 120	●		MOD	●	
	S16	Raster - Yellow 120	●		MOD	●	
	S17	Raster - Gray 120	●		MOD	●	
	S18	Raster - Red 626	●		MOD	●	
	S19	Raster - Green 626	●		MOD	●	
	S20	Raster - Blue 626	●		MOD	●	
	S21	Raster - Red 1023+	●		MOD	●	
	S22	Raster - Green 1023+	●		MOD	●	
	S23	Raster - Blue 1023+	●		MOD	●	
	S24	Raster - Green 225	●		MOD	●	
	S25	Raster - Gray 307	●		MOD	●	
MSE	S00	Product form : one body/monitor model	●		MOD	●	Note 1
	S01	Product form : System model	●		MOD	●	Note 1
MST	S00	Display one screen		●			
	S01	PsideP (Main size: normal)		●			
	S02	PinP (Right down)		●			
	S03	PinP (Right up)		●			
	S04	PinP (Left down)		●			
	S05	PinP (Left up)		●			
	S08	SWAP (Exchanging sub-screen)		●			
N							
NGP	S00	Negative positive inversion: OFF	●				
	S01	Negative positive inversion: ON	●				
O							
OSD	S00	OSD display setting: OFF		●	MAIN		
	S01	OSD display setting: ON		●	MAIN		
P							
PAV	S00	AV selection: FACTORY	●				
	S01	AV selection: STANDARD / PERFORMANCE	●				
	S02	AV selection: DYNAMIC	●				
	S03	AV selection: MOVIE	●				
	S04	AV selection: GAME	●				
	S05	AV selection: SPORT	●				
	S06	AV selection: PURE	●				
	S07	AV selection: USER	●				

Note 1: It is necessary to turn off the power for reflecting the setting change.

Command Name		Function	Active U-com		Last Memory	Effective only in Factory mode	Remarks
			MDU	MTB			
P							
PAV	S08	AV selection: isf-DAY	●				
	S09	AV selection: isf-NIGHT	●				
	S10	AV selection: OPTIMUM	●				
	S11	AV selection: isf-AUTO	●				
	S12	AV selection: Standard	●				
	S13	AV selection: Reserved (Australian standard)	●				
PBH	***	Panel white balance adjustment - Blue highlight	●		MOD	●	
PBL	***	Panel white balance adjustment - Blue low light	●		MOD	●	
PBX	***	Panel Bx measuring value	●		MOD	●	
PBY	***	Panel By measuring value	●		MOD	●	
PCS	S00	Normal operation	●				
	S01	Catalog specification operation	●				
PDM	S00	Passing PD signals to the POWER SUPPLY Unit => Power-down	●				
	S01	Not passing PD signals to the POWER SUPPLY Unit => No power-down	●				
PES	S00	For general-purpose commonness: Standard	●				
	S01	For general-purpose commonness: Energy saving 1	●				
	S02	For general-purpose commonness: Energy saving 2	●				
	S10	For general-purpose Japan standard: Standard	●				
	S11	For general-purpose Japan standard: Energy saving 1	●				
	S12	For general-purpose Japan standard: Energy saving 2	●				
PFL	S**	Center luminance correction	●				
	S00	Peripheral luminance correction: OFF	●				
	S01	Peripheral luminance correction: ON fixed	●				
	S02	Peripheral luminance correction: APL interlocked ON	●				
PFN		Factory mode at panel side: OFF	●			●	
PFS		Setup the panel side to shipment	●		MOD	●	
PFY		Factory mode at panel side: ON	●				Note 2
PGB	S00	Blue gamma setting: Straight	●				
	S01	Blue gamma setting: Fixed on 1.6	●				
	S02	Blue gamma setting: Fixed on 1.7	●				
	S03	Blue gamma setting: Fixed on 1.8	●				
	S04	Blue gamma setting: Fixed on 1.9	●				
	S05	Blue gamma setting: Fixed on 2.0	●				
	S06	Blue gamma setting: Fixed on 2.1	●				
	S07	Blue gamma setting: Fixed on 2.2	●				
	S08	Blue gamma setting: Fixed on 2.3	●				
	S09	Blue gamma setting: Fixed on 2.4	●				
	S10-31	Blue gamma setting: Customize	●				
PGG	S00	Green gamma setting: Straight	●				
	S01	Green gamma setting: Fixed on 1.6	●				
	S02	Green gamma setting: Fixed on 1.7	●				
	S03	Green gamma setting: Fixed on 1.8	●				
	S04	Green gamma setting: Fixed on 1.9	●				
	S05	Green gamma setting: Fixed on 2.0	●				
	S06	Green gamma setting: Fixed on 2.1	●				
	S07	Green gamma setting: Fixed on 2.2	●				
	S08	Green gamma setting: Fixed on 2.3	●				
	S09	Green gamma setting: Fixed on 2.4	●				
	S10-31	Green gamma setting: Customize	●				
PGH	***	Panel white balance adjustment - Green highlight	●		MOD	●	

Note 2: Mask setting and the picture quality setting of MTB are not changed.

Command Name		Function	Active U-com		Last Memory	Effective only in Factory mode	Remarks
			MDU	MTB			
P							
PGL	***	Panel white balance adjustment - Green low light	●		MOD	●	
PGX	***	Panel Gx measuring value	●		MOD	●	
PGY	***	Panel Gy measuring value	●		MOD	●	
PGR	S00	Red gamma setting: Straight	●				
	S01	Red gamma setting: Fixed on 1.6	●				
	S02	Red gamma setting: Fixed on 1.7	●				
	S03	Red gamma setting: Fixed on 1.8	●				
	S04	Red gamma setting: Fixed on 1.9	●				
	S05	Red gamma setting: Fixed on 2.0	●				
	S06	Red gamma setting: Fixed on 2.1	●				
	S07	Red gamma setting: Fixed on 2.2	●				
	S08	Red gamma setting: Fixed on 2.3	●				
	S09	Red gamma setting: Fixed on 2.4	●				
	S10-31	Redt gamma setting: Customize	●				
PKD	S00	Peak luminance detection: OFF	●			●	
	S01	Peak luminance detection: ON	●			●	
PKL	S00	No brightness limitation : 100 %	●				
	S01	Brightness limitation 1 : 87 %	●				
	S02	Brightness limitation 2 : 73 %	●				
	S03	Brightness limitation 3 : 60 %	●				
	S04	Brightness limitation 4 : 52 %	●				
	S05	Brightness limitation 5 : 40 %	●				
	S06	Brightness limitation 6 : 27 %	●				
	S07	Brightness limitation 7 : 13 %	●				
PMT	S00	Canceling panel muting	●				Note 3
	S01	Panel muting	●				
POF		Power OFF	●	●	MAIN		
PON		Power ON	●	●	MAIN		
PPT	S00	Panel protection function: OFF	●			●	
	S01	Panel protection function: ON	●			●	
PRH	***	Panel white balance adjustment - Red highlight	●		MOD	●	
PRL	***	Panel white balance adjustment - Red low light	●		MOD	●	
PRX	***	Panel Rx measuring value	●		MOD	●	
PRY	***	Panel Ry measuring value	●		MOD	●	
PUC	S00	Pure cinema: OFF		●	MAIN	●	
	S01	Pure cinema: Standard		●	MAIN	●	
	S02	Pure cinema: Advance		●	MAIN	●	
	S03	Pure cinema: Smooth		●	MAIN	●	
Q							
QAJ		Acquiring various adjustment values of the panel side	●				
QMT		Acquiring temperature of MTB/MR side and Fan speed		●			
QNG		Acquiring shutdown information of MTB/MR side		●			
QPD		Acquiring logs of power-down points	●				
QPM		Acquiring data of the pulse meter	●				
QPW		Acquiring panel white balance adjustment values	●				
QPF		Acquiring characteristic / function setting values of the panel side	●				
QS1		Acquiring unit data, such as the software version	●	●			
QS2		Acquiring data on the status of the unit, such as temperature	●				

Note 3: The mute is unable while displaying the internal mask.

Command Name		Function	Active U-com		Last Memory	Effective only in Factory mode	Remarks
			MDU	MTB			
Q							
QS3		Each information output for panel	●				
QS5		Each information output for panel (individual function)	●				
QSE		Acquiring unit data, such as the software version of MTB/MR side (specific destination)		●			
QSP		Acquiring sub-version of the microcomputer for panel	●				
QSD		Acquiring data on shutdown	●				
QSI		Acquiring data related with signals	●				
R							
R1K	***	First reset (wedge width)	●		MOD	●	
R2K	***	Second reset (wedge width)	●		MOD	●	
RBL	S00-07	BLUE setting for panel degradation correction : Level 0 to 7	●		MOD	●	Note 1
RGL	S00-07	GREEN setting for panel degradation correction : Level 0 to 7	●		MOD	●	Note 1
RLS	S00	Room light sensor operation : OFF	●				
	S01-05	Room light sensor operation : 1 to 5	●				
RRL	S00-07	RED setting for panel degradation correction : Level 0 to 7	●		MOD	●	Note 1
S							
SAT	***	Timing adjustment between the scan and address	●		MOD	●	
SCW	S00	Normal operation	●				
	S01	Draw the warning blue window (left side)	●				
	S02	Draw the warning red window (right side)	●				
SDF	S00	SRS DEFINITION: OFF		●			
	S01	SRS DEFINITION: DEFINITION1		●			
	S02	SRS DEFINITION: DEFINITION2		●			
	S03	SRS DEFINITION: DEFINITION3		●			
SDM	S00	Shutdown enabled	●				
	S01	Shutdown prohibited	●				
SFR	S01-08	Measures against AM radio noise - Pattern 1 to 8	●		MOD	●	Note 1
SKM	S00	STREAKING correction mode OFF	●		MOD	●	
	S01-08	STREAKING correction mode Setting mode 1 to 8	●		MOD	●	
SMC	S00	Smooth clear drive OFF	●			●	
	S01	Smooth clear drive ON	●			●	
SML	***	Adjustment of the side mask level		●	MAIN	●	
SN0	***	Setting of the serial No. 0 (panel)	●		MOD	●	
SN1	***	Setting of the serial No. 1 (panel)	●		MOD	●	
SN2	***	Setting of the serial No. 2 (panel)	●		MOD	●	
SN3	***	Setting of the serial No. 3 (panel)	●		MOD	●	
SN4	***	Setting of the serial No. 4 (panel)	●		MOD	●	
SQM	S01	VIDEO sequence setting	●				
	S02	PC sequence setting	●				
	S03	FILM sequence setting	●				
SRS	S00	SRS: OFF		●			
	S01	SRS: SRS1		●			
	S02	SRS: SRS2		●			
	S03	SRS: SRS3		●			
SSM	S00	SSCG OFF	●			●	
	S01	SSCG ON	●			●	
SWA	***	Estimated value of the illuminant color (absolute value)	●				
SWF	S00	Reflection of the estimated information of the illuminant color: OFF	●				
	S01	Reflection of the estimated information of the illuminant color: ON	●				
SWR	***	Estimated value of the illuminant color (relative value)	●				

Note 1: It is necessary to turn off the power for reflecting the setting change.

Command Name		Function	Active U-com		Last Memory	Effective only in Factory mode	Remarks
			MDU	MTB			
S							
SZM	S00	Setting the screen size to Dot by Dot		●	MAIN		
	S01	Setting the screen size to 4 :3		●	MAIN		
	S02	Setting the screen size to FULL or FULL 1080i		●	MAIN		
	S03	Setting the screen size to ZOOM		●	MAIN		
	S04	Setting the screen size to CINEMA		●	MAIN		
	S05	Setting the screen size to WIDE or WIDE1		●	MAIN		
	S06	Setting the screen size to FULL 14:9		●	MAIN		
	S07	Setting the screen size to CINEMA 14:9		●	MAIN		
	S11	Setting the screen size to AUTO		●	MAIN		
	S12	Setting the screen size to WIDE2		●	MAIN		
T							
TBS	S00	TRUBASS: OFF		●			
	S01	TRUBASS: TRUBASS1		●			
	S02	TRUBASS: TRUBASS2		●			
	S03	TRUBASS: TRUBASS3		●			
THS	S00	Theater port interlock operation OFF	●				
	S01	Theater port interlock operation ON	●				
U							
UAJ		Determining the flag for the DIGITAL Assy adjustment in "not adjusted"	●		MOD	●	
UP*		To add * to the adjustment value (* = 0 to 9, add 10 with UP0 and set to maximum value with UPF)		●			
V							
V1F	***	Adjustment of the reference value of Vyknofs 1, 2 voltage	●		MOD	●	
V3F	***	Adjustment of the reference value of Vyknofs 3 voltage	●		MOD	●	
V4F	***	Adjustment of the reference value of Vyknofs 4 voltage	●		MOD	●	
VFQ	S02	Setting the frequency in Mask mode to VD-50 Hz	●		MOD	●	
	S03	Setting the frequency in Mask mode to VD-60 Hz	●		MOD	●	
	S05	Setting the frequency in Mask mode to VD-72 Hz	●		MOD	●	
	S06	Setting the frequency in Mask mode to VD-75 Hz-1	●		MOD	●	
	S07	Setting the frequency in Mask mode to VD-75 Hz-2	●		MOD	●	
	S13	Setting the frequency in Mask mode to PC-60 Hz	●		MOD	●	
VOF	***	Adjustment of the reference value of Vysnofs voltage	●		MOD	●	
VOL	UP*, DW*, ***	To adjust the volume		●			Note 4
VRP	***	Adjustment of the reference value of Vyprst voltage	●		MOD	●	
VSU	***	Adjustment of the reference value of Vsus voltage	●		MOD	●	
VX1	***	Adjustment of the reference value of Vxpofs1 voltage	●		MOD	●	
VX2	***	Adjustment of the reference value of Vxpofs2 voltage	●		MOD	●	
VYF	***	Adjustment of the reference value of Δ Vyknofs1, 2/3/4 voltage	●		MOD	●	
W							
WBI	S00	Panel WB standard output mode: OFF	●			●	
	S01	Panel WB standard output mode: ON	●			●	
X							
X1B	***	3SF and later-first XSUS (resonance up width)	●		MOD	●	
X3B	***	2SF-third XSUS (resonance up width)	●		MOD	●	
XSB	***	2SF-repeat XSUS (resonance up width)	●		MOD	●	

Note 4: Use this command by designating the adjustment value *** (=000 to 060).

Command Name		Function	Active U-com		Last Memory	Effective only in Factory mode	Remarks
			MDU	MTB			
Y							
Y1K	***	1SF-YSUS-Tail (wedge width)	●		MOD	●	
Y1Z	***	1SF-YSUS-Tail (resonance down width)	●		MOD	●	
Y2B	***	2SF-second YSUS (resonance up width)	●		MOD	●	
Y2K	***	2SF-YSUS-Tail (wedge width)	●		MOD	●	
Y2Z	***	2SF-YSUS-Tail (resonance down width)	●		MOD	●	
YNK	***	3SF and later (SSF 2 pulses)-YSUS Tail (wedge width)	●		MOD	●	
YTK	***	3SF and later-YSUS Tail (wedge width)	●		MOD	●	
YTZ	***	3SF and later-YSUS Tail (resonance down width)	●		MOD	●	
YSB	***	2SF-repeat YSUS (resonance up width)	●		MOD	●	
Z							
ZME	***	Initializing the video EEPROM data of the MTB/MR side		●		●	

5.9 DETAILS OF EACH COMMANDS

[1] QS1 (PANEL STATUS)

Model information and version information are returned.

Command Format	Effective Operation Modes	Function	Remarks
[QS1]	Every Time	Output of status	Return data: 3 (ECO) + 112 (DATA) + 2 (CS) = 117 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QS1
1	Resolution/Size	1 byte	F
2	Panel Generation	1 byte	9
3	Destination	1 byte	*
4	Grade	1 byte	*
5	Panel Product Form	1 byte	A
6	Boot version of Module microcomputer	3 byte	-01A
7	Program version of Module microcomputer	8 byte	-01A ‘ ’ ’ ’
8	Boot version of sequence processor	3 byte	-01Z
9	Program version of sequence processor	8 byte	-01Z ‘ ’ ’ ’
10	Panel information	8 byte	G9_50F_2
11	Derivative operation identification	1 byte	*
12	Reserved (panel section)	7 byte	*******
13	, (comma)	1 byte	,
14	MTB generation	1 byte	9
15	MTB destination	1 byte	A
16	MTB grade	1 byte	H
17	MTB product form	1 byte	B
18	Program version of IF microcomputer	8 byte	-01A
19	Boot version of IF microcomputer	4 byte	01A
20	Program version of Main microcomputer	8 byte	-01A
21	Boot version of Main microcomputer	4 byte	01A
22	Common version of ASIC	8 byte	-01A
23	Boot version of ASIC	8 byte	01A
24	PRS version of ASIC	8 byte	-01A
25	PIC version of ASIC	8 byte	-01A
26	Common version of the Digital Tuner	8 byte	-0A
27	Boot version of the Digital Tuner	4 byte	01A
CS	2 Byte	2 byte	4A

11: Derivative Operation Identification	
*	Standard model operation
1	Derivative model operation

14: MTB Generation	
9	G9

15: MTB Destination	
A	North America
C	China
E	Europe
G	General
J	Japan
U	Australia

16: MTB Grade	
H	Elite/One body Europe HD /System Europe HD/One body Australia
T	Regular/One body Europe SD
D	Derivative Model
*	No Grade (Japan/General/China)

17: MTB Product Form	
B	One body model
S	System model

1: Resolution/Size	
F	50-FHD (1920*1080)
G	60-FHD (1920*1080)

2: Panel Generation	
9	G9

3: Destination	
*	Commonness

4: Grade	
*	Commonness
Z	Evaluation

5: Panel Product Form	
A	One body/monitor model
S	System model

10: Panel Information (8 Byte)		
1 to 2nd byte	G9	Generation information
4 to 5th byte	50	50 inch
	60	60 inch
6th byte	F	FHD
8th byte	3	50 inch 2nd PLANT (Reserved)
	2	50 inch 2nd PLANT
	1	50 inch 1st PLANT
	‘	Others

‘ = space

[2] QS2 (PANEL OPERATION DATA)

The command QS2 is for acquiring data on the panel's operational information.

Command Format	Effective Operation Modes	Function	Remarks
[QS2]	Every Time	Output of status	Return data: 3 (ECO) + 34 (DATA) + 2 (CS) = 39 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QS2
1	Notify of the standby operation transition	1 byte	1
2	Adjustment flag of the main unit	1 byte	0
3	Adjustment-data backup flag	1 byte	0
4	"1st PD" data	1 byte	0
5	"2nd PD" data	1 byte	0
6	Color sensor data	1 byte	0
7	Reserved	2 byte	**
8	Temperature data (TEMP 1)	3 byte	128
9	SD data	1 byte	0
10	SD subcategory data	1 byte	0
11	Operation status induced by SD	1 byte	0
12	Reserved	3 byte	***
13	HOUR METER	8 byte	00000259
14	MASK indication	1 byte	0
15	Still picture detection	1 byte	0
16	SCAN protection detection	1 byte	0
17	Panel crack detection	1 byte	0
18	Address emergency detection	1 byte	0
19	Reserved	4 byte	****
CS	2 Byte	2 byte	4A

1: Power supply status	
P	During power ON
0	Shifting to Passive Standby is not possible.
1	Shifting to Passive Standby is possible.

2: Adjustment flag of the main unit	
0	Adjustment completed
1	Adjustment not completed

3: Adjustment-data backup flag	
0	Adjustment completed
1	Adjustment not completed

4, 5: PD data	
0	No PD data
2	POWER
3	SCAN
4	SCN-5V
6	Y-DCDC
7	Y-SUS
8	ADRS
A	X-DCDC
B	X-SUS
C	DIG-DCDC
F	UNKNOWN

6: Color sensor data	
-	Function OFF (including standby)
0	Normal
1	Hardware connection is not completed
2	Data mismatching

9: SD data	
0	No SD
1	SQ_LSI
2	MDU-DEVICE
3	RST2
4	Panel temperature

10-1: SD subcategory (SQ_LSI)	
0	No SD-Sub data
1	Communication error
2	Drive stop
3	BUSY
4	Version mismatching (H/S)
5	Version mismatching (H/M)
6	Version mismatching (H/I)

10-2: SD subcategory (MDU-DEVICE)	
0	No SD-Sub data
1	EEPROM
2	BACKUP
3	DAC

10-3: SD subcategory (Panel temperature)	
0	No SD-Sub data
1	Panel high temperature
2	Panel low temperature

11: Operation status induced by SD	
0	Normal
1	Relay-off completed
2	During warning indication

14: MASK indication	
0	MASK-OFF
1	MASK-ON

15 to 18: Detection of Each Protection function	
0	Normal operation
1	At detection of protection operation

[3] QS3 (OTHER DATA ON THE PANEL)

The command QS3 is for acquiring data on operational information of the panel.

Command Format	Effective Operation Modes	Function	Remarks
[QS3]	Every Time	Output of status	Return data: 3 (ECO) + 58 (DATA) + 2 (CS) = 63 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QS3
1	SERIAL	15 byte	- - - - - - - - - - - - - - -
2	HOUR METER	8 byte	00000000
3	TOTAL HR METER	8 byte	00000000
4	PON COUNTER	8 byte	00000000
5	Panel temperature (*1)	5 byte	23.5
6	Reserved (TEMP0 acquisition)	5 byte	_ _ _._
7	MAX panel temperature history (*1)	5 byte	78.3
8	Reserved	4 byte	****
CS	2 Byte	2 byte	94

Note
(*1) : Centigrade scale

[4] QS5 (COLOR SENSOR DATA)

The command QS5 is for acquiring the color sensor information.

Command Format	Effective Operation Modes	Function	Remarks
[QS5]	Every Time	Output of status	Return data: 3 (ECO) + 45 (DATA) + 2 (CS) = 50 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QS5
1	Color sensor data (Note)	1 byte	2
2	RED data of color sensor	4 byte	0425
3	GREEN data of color sensor	4 byte	2112
4	BLUE data of color sensor	4 byte	5000
5	Reserved	32 byte	** to **
CS	2 Byte	2 byte	94

Note: The color sensor data is output as the same data as QS2.

[5] QSP (SUB VERSION OF THE PANEL SECTION)

The command QSP is for acquiring sub version data on software of the panel.

Command Format	Effective Operation Modes	Function	Remarks
[QSP]	Every Time	Output of status	Return data: 3 (ECO) + 40 (DATA) + 2 (CS) = 45 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QSP
1	MDUcom-PRG	8 byte	=01Y
2	MDUcom-DATA_TBL	8 byte	=01Y ’ ’ ’ ’
3	SQ_LSI-PRG	4 byte	=01Y
4	SQ_LSI-PIC_TBL	8 byte	=01Y ’ ’ ’ ’
5	SQ_LSI-SEQ_DATA	4 byte	=01Y
6	Reserved	8 byte	********
CS	2 Byte	2 byte	A3

[6] QAJ (PANEL ADJUSTMENT DATA)

The command QAJ is for acquiring the panel's factory-preset data.

Command Format	Effective Operation Modes	Function	Remarks
[QAJ]	Every Time	Output of status	Return data: 3 (ECO) + 84 (DATA) + 2 (CS) = 89 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QAJ
1	Vsus adjustment value	3 byte	128
2	Vysnofs adjustment value	3 byte	128
3	Vyprst adjustment value	3 byte	128
4	Vxpofs1 adjustment value	3 byte	128
5	Vxpofs2 adjustment value	3 byte	128
6	Vyknofs1,2 adjustment value	3 byte	128
7	Vyknofs3 adjustment value	3 byte	128
8	Vyknofs4 adjustment value	3 byte	128
9	∆ Vyknofs1,2/3/4 adjustment value	3 byte	128
10	Reserved	6 byte	******
11	R1K adjustment value	3 byte	128
12	R2K adjustment value	3 byte	128
13	Y1K adjustment value	3 byte	128
14	Y1Z adjustment value	3 byte	128
15	X1B adjustment value	3 byte	128
16	Y2B adjustment value	3 byte	128
17	X3B adjustment value	3 byte	128
18	YSB adjustment value	3 byte	128
19	XSB adjustment value	3 byte	128
20	YTK adjustment value	3 byte	128
21	YTZ adjustment value	3 byte	128
22	Y2K adjustment value	3 byte	128
23	Y2Z adjustment value	3 byte	128
24	YNK adjustment value	3 byte	128
25	SAT adjustment value	3 byte	128
26	Reserved	3 byte	***
27	AM radio countermeasure	1 byte	1
28	Reserved	2 byte	**
CS	2 Byte	2 byte	B7

27: AM radio countermeasure	
n	n: 1 to 8 (SUS frequency n)

[7] QPW (VIDEO ADJUSTMENT DATA OF THE PANEL)

The command QPW is for acquiring the factory-preset data about the video of the panel.

Command Format	Effective Operation Modes	Function	Remarks
[QPW]	Every Time	Output of status	Return data: 3 (ECO) + 40 (DATA) + 2 (CS) = 45 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QPW
1	Type of drive sequence (Note 1)	4 byte	60VS
2	ABL adjustment table	1 byte	1
3	Type of WB adjustment table (Note 1)	1 byte	1
4	ABL adjustment value	3 byte	128
5	R-HIGH adjustment value	3 byte	256
6	G-HIGH adjustment value	3 byte	256
7	B-HIGH adjustment value	3 byte	256
8	R-LOW adjustment value	3 byte	512
9	G-LOW adjustment value	3 byte	512
10	B-LOW adjustment value	3 byte	512
11	R gamma setting	2 byte	31
12	G gamma setting	2 byte	10
13	B gamma setting	2 byte	10
14	Streaking correction	1 byte	1
15	Center luminance correction	1 byte	0
16	Reserved	1 byte	*
17	Interlocked with APL	1 byte	0
18	Transition of protective operations	1 byte	0
19	Reserved	2 byte	**
CS	2 Byte	2 byte	37

1: Type of Drive sequence	
50VS	Video 50 Hz
60VS	Video 60 Hz
72VS	Video 72 Hz
75V1	Video 75-1 Hz
75V2	Video 75-2 Hz
60PS	PC 60 Hz

2: ABL adjustment table	
n	n: 1 to 3

3: Type of WB adjustment table	
n	n: 1 to 4

11, 12, 13: RGB Gamma setting	
n	00 to 31

15: Center luminance correction	
0	OFF
1	ON
2	ON (interlocked with APL)

17: Interlocked with APL	
0	OFF
1	ON
2	WB interlocked ON/γ OFF
3	WB interlocked OFF/γ ON

18: Transition of protective operations	
0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

Note 1: The "75 Hz-2" Drive Sequence type signals and WB Adjustment Table 4 are output only when "75 Hz-2" (VFQS07) is selected for internal signals (mask signals).
When external signals are selected and the Drive Sequence type is 75 Hz, "75 Hz-1" is output because "75 Hz-1" and "75 Hz-2" are not distinguished for external signals.

[8] QPF (FUNCTION OF THE PANEL)

The command QPF is for acquiring the characteristic and the function setting value of the panel.

Command Format	Effective Operation Modes	Function	Remarks
[QPF]	Every Time	Output of status	Return data: 3 (ECO) + 69 (DATA) + 2 (CS) = 74 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QPF
1	R-REVISE setting value	1 byte	0
2	G-REVISE setting value	1 byte	0
3	B-REVISE setting value	1 byte	0
4	Reserved	3 byte	***
5	ADDRESS L1,L2 setting value	2 byte	01
6	ADDRESS L3,L4 setting value	2 byte	13
7	ADDRESS U1,U2 setting value	2 byte	32
8	ADDRESS U3,U4 setting value	2 byte	30
9	Reserved	4 byte	****
10	Streaking correction	1 byte	1
11	Full-screen black display mode	1 byte	1
12	Reserved	4 byte	****
13	PANEL RX	3 byte	512
14	PANEL RY	3 byte	512
15	PANEL GX	3 byte	512
16	PANEL GY	3 byte	512
17	PANEL BX	3 byte	512
18	PANEL BY	3 byte	512
19	Reserved	6 byte	******
20	Color sensor R coefficient	3 byte	***
21	Color sensor G coefficient	3 byte	***
22	Color sensor B coefficient	3 byte	***
23	Reserved	12 byte	** to **
CS	2 Byte	2 byte	37

1: 2: 3: RGB-REVISE setting value	
n	n: 0 to 7 (Level n)

5 to 8: ADDRESS α, β setting	
nm	n: 0 to 9 (Address α setting PHASE n)
	m: 0 to 9 (Address β setting PHASE m)

10: Streaking correction	
0	OFF
n	n: 1 to 8 (Mode n)

11: Full-screen black display mode	
0	OFF (In-phase SUS drive prohibition)
1	MODE1 (In-phase SUS drive permission)

[9] QPM (PULSE METER VALUE)

The command QPM is for acquiring the accumulated pulse count.

Command Format	Effective Operation Modes	Function	Remarks
[QPM]	Every Time	Output of status	Return data: 3 (ECO) + 40 (DATA) + 2 (CS) = 45 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QPM
1	Pulse meter B 1	8 byte	00000000
2	Pulse meter B 2	8 byte	00000000
3	Pulse meter B 3	8 byte	00000000
4	Pulse meter B 4	8 byte	00000000
5	Pulse meter B 5	8 byte	00000000
CS	2 Byte	2 byte	E7

Note:
The minimum for a returned value of the pulse meter for each block (B1-B2) is one million.

[10] QPD (POWER DOWN LOGS)

The command QPD is for acquiring data from the 8 latest power-down (PD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QPD]	Every Time	Output of status	Return data: 3 (ECO) + 80 (DATA) + 2 (CS) = 85 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QPD
1	Latest "1st PD" data	1 byte	A
2	Latest "2nd PD" data	1 byte	2
3	Data from the hour meter for the latest PD	8 byte	00010020
4	Second latest "1st PD" data	1 byte	E
5	Second latest "2nd PD" data	1 byte	9
6	Data from the hour meter for the second latest PD	8 byte	00008523
7	Third latest "1st PD" data	1 byte	4
8	Third latest "2nd PD" data	1 byte	3
9	Data from the hour meter for the third latest PD	8 byte	00004335
10	Fourth latest "1st PD" data	1 byte	2
11	Fourth latest "2nd PD" data	1 byte	0
12	Data from the hour meter for the fourth latest PD	8 byte	00000945
13	Fifth latest "1st PD" data	1 byte	4
14	Fifth latest "2nd PD" data	1 byte	0
15	Data from the hour meter for the fifth latest PD	8 byte	00000715
16	Sixth latest "1st PD" data	1 byte	A
17	Sixth latest "2nd PD" data	1 byte	2
18	Data from the hour meter for the sixth latest PD	8 byte	00000552
19	Seventh latest "1st PD" data	1 byte	A
20	Seventh latest "2nd PD" data	1 byte	0
21	Data from the hour meter for the seventh latest PD	8 byte	00000213
22	Eighth latest "1st PD" data	1 byte	D
23	Eighth latest "2nd PD" data	1 byte	0
24	Data from the hour meter for the eighth latest PD	8 byte	000001A7
CS	2 Byte	2 byte	27

• PD data	
0	No PD
2	P-POWER
3	SCAN
4	SCN-5V
6	Y-DCDC
7	Y-SUS
8	Address
A	X-DCDC
B	X-SUS
C	DIGI-DCDC
F	UNKNOWN

[11] QSD (SHUTDOWN LOGS of the Panel Section)

The command QSD is for acquiring the data from the 8 latest shutdown (SD) logs of the panel section.

Command Format	Effective Operation Modes	Function	Remarks
[QSD]	Every Time	Output of status	Return data: 3 (ECO) + 80 (DATA) + 2 (CS) = 85 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QSD
1	Latest SD data	1 byte	1
2	Latest SD subcategory data	1 byte	0
3	Data from the hour meter for the latest SD	8 byte	00752013
4	Second latest SD data	1 byte	5
5	Second latest SD subcategory data	1 byte	0
6	Data from the hour meter for the second latest SD	8 byte	00495204
7	Third latest SD data	1 byte	2
8	Third latest SD subcategory data	1 byte	3
9	Data from the hour meter for the third latest SD	8 byte	00100355
10	Fourth latest SD data	1 byte	2
11	Fourth latest SD subcategory data	1 byte	5
12	Data from the hour meter for the fourth latest SD	8 byte	00075620
13	Fifth latest SD data	1 byte	1
14	Fifth latest SD subcategory data	1 byte	0
15	Data from the hour meter for the fifth latest SD	8 byte	00000852
16	Sixth latest SD data	1 byte	2
17	Sixth latest SD subcategory data	1 byte	2
18	Data from the hour meter for the sixth latest SD	8 byte	00000451
19	Seventh latest SD data	1 byte	0
20	Seventh latest SD subcategory data	1 byte	0
21	Data from the hour meter for the seventh latest SD	8 byte	00000000
22	Eighth latest SD data	1 byte	0
23	Eighth latest SD subcategory data	1 byte	0
24	Data from the hour meter for the eighth latest SD	8 byte	00000000
CS	2 Byte	2 Byte	7D

• SD data	
0	No SD
1	SQ_LSI
2	MDU-DEVICE
3	RST2
4	Panel temperature

• SD subcategory (SQ_LSI)	
0	No SD-Sub data
1	Communication error
2	Drive stop
3	BUSY
4	Version mismatching (H/S)
5	Version mismatching (H/M)
6	Version mismatching (H/I)

• SD subcategory (MDU-DEVICE)	
0	No SD-Sub data
1	EEPROM
2	BACKUP
3	DAC

• SD subcategory (Panel temperature)	
0	No SD-Sub data
1	TEMP1 (high temperature)
2	TEMP1 (low temperature)

[12] QSE (DESTINATION PECULIAR INFORMATION)

Induce it peculiar, individual information is acquired.

• For PDP-LX5090

Command Format	Effective Operation Modes	Function	Remarks
[QSE]	Every time	Output of status	Return data: 3 (ECO) + 12 (DATA) + 2 (CS) = 17 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QSE
1	Reserved	4 byte	****
2	DTB HARDWARE version	4 byte	FFFF
3	User setting password	4 byte	1234
CS	Check Sum	2 byte	13

• For PDP-LX5090H

Command Format	Effective Operation Modes	Function	Remarks
[QSE]	Every time	Output of status	Return data: 3 (ECO) + 28 (DATA) + 2 (CS) = 33 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QSE
1	Check flag for production	1 byte	E
2	Reserved	3 byte	***
3	DTB HARDWARE version	4 byte	0342
4	Reserved	16 byte	****************
5	User setting password	4 byte	1234
CS	Check Sum	2 byte	13

[13] QMT (STATUS INFORMATION OF MTB/MR SECTION)

Temperature information / FAN rotation state / Room light sensor information on the MTB/MR section is acquired.

Command Format	Effective Operation Modes	Function	Remarks
[QMT]	Every time	Output of status	Return data: 3 (ECO) + 8 (DATA) = 11 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QMT
1	A/D value of temperature of MTB/MR section	3 byte	276
2	FAN rotating speed of MTB/MR section (0: STOP, 1: LOW, 2: HIGH)	1 byte	1
3	A/D value of room light sensor	3 byte	009
4	Level of room light sensor (Value: 1 to 5)	1 byte	5

* Returned each block.

[14] QNG (SHUTDOWN INFORMATION OF MTB SECTION)

The command QNG is for acquiring the data from the 8 latest shutdown (SD) logs of the MTB section.

Command Format	Effective Operation Modes	Function	Remarks
[QNG]	Every time	To acquire data on the shutdown (NG) logs of MTB side	Return data: 3 (ECO) + 96 (DATA) + 2 (CS) = 101 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QNG
1	Latest SD data	1 byte	1
2	Latest SD subcategory data	1 byte	0
3	Data from the MTB hour meter for the latest SD	7 byte	0752013
4	Reserved	3 byte	000 fixed
5	Second latest SD data	1 byte	5
6	Second latest SD subcategory data	1 byte	1
7	Data from the MTB hour meter for the second latest SD	7 byte	0495204
8	Reserved	3 byte	000 fixed
9	Third latest SD data	1 byte	A
10	Third latest SD subcategory data	1 byte	2
11	Data from the MTB hour meter for the third latest SD	7 byte	0365814
12	Reserved	3 byte	000 fixed
13	Fourth latest SD data	1 byte	5
14	Fourth latest SD subcategory data	1 byte	0
15	Data from the MTB hour meter for the fourth latest SD	7 byte	0256612
16	Reserved	3 byte	000 fixed
17	Fifth latest SD data	1 byte	7
18	Fifth latest SD subcategory data	1 byte	2
19	Data from the MTB hour meter for the fifth latest SD	7 byte	0105628
20	Reserved	3 byte	000 fixed
21	Sixth latest SD data	1 byte	B
22	Sixth latest SD subcategory data	1 byte	0
23	Data from the MTB hour meter for the sixth latest SD	7 byte	0003009
24	Reserved	3 byte	000 fixed
25	Seventh latest SD data	1 byte	C
26	Seventh latest SD subcategory data	1 byte	1
27	Data from the MTB hour meter for the seventh latest SD	7 byte	00002A9
28	Reserved	3 byte	000 fixed
29	Eighth latest SD data	1 byte	C
30	Eighth latest SD subcategory data	1 byte	4
31	Data from the MTB hour meter for the eighth latest SD	7 byte	0000012
32	Reserved	3 byte	000 fixed
CS	2 Byte	2 Byte	7D

< SD Information No. >

Frequency *	Shutdown Factor	Remarks (Operation)
1	Failure of Power Supply of VCC	Immediately Shutdown
5	Shutdown signal from D-Amp. / short-circuit of speaker terminal	Go to No. 5 Subcategory Information
6	Failure of communication with Module microcomputer	Immediately Shutdown
7	Failure in 3-wire serial communication of Main microcomputer	Go to No. 7 Subcategory Information
8	Failure in IIC communication of Main microcomputer	Go to No. 8 Subcategory Information
9	Failure in Communication of Main microcomputer	Immediately Shutdown
10(A)	Abnormally in FAN	Go to No. 10 Subcategory Information
11(B)	Abnormally in high temperature	Immediately Shutdown
12(C)	Failure in Digital Tuner	Go to No. 12 Subcategory Information
13(D)	Failure in Power Supply at MTB section	Go to No. 13 Subcategory Information
15(F)	Failure in Main EEPROM	Immediately Shutdown

∗: Indicates the frequency of Blue LED flashing when the shutdown is occurred.

< No. 5 Subcategory Information on "Shutdown signal from D-Amp./short-circuit of speaker terminal" >

Value	Shutdown Factor	Remarks (Operation)
1	A_NG	Shutdown after 5 seconds warning
2	OTW	Shutdown after 5 seconds warning

< No. 7 Subcategory Information on "Failure in 3-wire serial communication of Main microcomputer" >

Value	Shutdown Factor	Remarks (Operation)
1	Communication error of IF microcomputer	Immediately Shutdown
2	Communication error of ARIA	Immediately Shutdown

< No. 8 Subcategory Information on "Failure in IIC communication of Main microcomputer" >

Value	Shutdown Factor	Remarks (Operation)
1	Tuner 1	Immediately Shutdown
2	MSP/MAP	Immediately Shutdown
3	AV-Switch	Immediately Shutdown
4	RGB-Switch	Immediately Shutdown
5	Main VDEC	Immediately Shutdown
6	VDEC-SDRAM	Immediately Shutdown
7	AD/PLL	Immediately Shutdown
8	HDMI	Immediately Shutdown
9	DisplayPortTx	Immediately Shutdown
B	US-MAP	Immediately Shutdown
C	GCR	Immediately Shutdown
D	COFDEM	Immediately Shutdown

< No. 10 Subcategory Information on "Abnormally in FAN" >

Value	Shutdown Factor	Remarks (Operation)
1	FAN 1	Immediately Shutdown
2	FAN 2	Immediately Shutdown

< No. 12 Subcategory Information on "Failure in Digital Tuner" >

Value	Shutdown Factor	Remarks (Operation)
1	Starting error of the digital tuner	Communication stop
2	Communication error with the digital tuner	
3	DTB device error	
4	Abnormmally in BCM7038	
5	Fugue	
6	Audio Chip	
7	Tuner 1/Tuner 1 or 2	
8	Card I/F IC	
9	VBI Slicer	
B	Flash	
C	EEPROM	
D	EEPROM	
F	DTV Antenna	
G	Home Gallery	
I	Application	
J	DEMOD(US)/COFDEM(EU)	
K	Tuner 2	
L	S2DEMOD	
M	LNB	

< No. 13 Subcategory Information on "Failure in Power supply at MTB section" >

Value	Shutdown Factor	Remarks (Operation)
1	RST 2	Immediately Shutdown
2	RST 4	Immediately Shutdown

[15] QSI (INPUT SIGNAL DATA)

The command QSI is for acquiring all data on input video signals.

Command Format	Effective Operation Modes	Function	Remarks
[QSI]	Every Time	Output of status	Return data: 3 (ECO) + 66 (DATA) + 2 (CS) = 71 Byte

Data Arrangement		Data Length	Output Example
ECO		3 Byte	QSI
1	Type of drive sequence (Note)	4 Byte	60VS
2	Type of ABL adjustment table (Note)	1 Byte	1
3	Type of WB adjustment table (Note)	1 Byte	1
4	Reserved	4 Byte	****
5	Total value of PRH	4 Byte	0256
6	Total value of PGH	4 Byte	0256
7	Total value of PBH	4 Byte	0256
8	Reserved	4 Byte	****
9	Total value of PRL	4 Byte	0512
10	Total value of PGL	4 Byte	0512
11	Total value of PBL	4 Byte	0512
12	Total value of ABL	3 Byte	128
13	V frequency distinction	4 Byte	6002
14	Reserved	4 Byte	****
15	APL acquiring data	4 Byte	1023
16	Number of SUS pulses	4 Byte	0457
17	Detection status of still picture	1 Byte	1
18	Detection status of cracking in the panel	1 Byte	1
19	Detection status of SCAN protection	1 Byte	1
20	Detection status of external protection	1 Byte	1
21	Transition of protection operations	1 Byte	0
22	Address emergency status	1 Byte	1
23	Detection status of reset operation	1 Byte	1
24	In-phase SUS mode status	1 Byte	1
25	Reserved	1 Byte	1
CS	2 Byte	2 Byte	27

Note: The types of drive sequence and ABL/WB table are output as the same data as QPW.

18 to 20: Each protection function	
0	Setting: OFF
1	Setting: ON (during wait)
2	Setting: ON (during operation)

21: Transition of protection operations	
0	Upper limit status for brightness
1	Brightness being reduced
2	Lower limit status for brightness
3	Brightness being increased

22: Address emergency status	
0	Normal status
1	Emergency status

23: Reset operation status	
A	All reset operation
2	Interlace 1/2 reset operation
4	Interlace 1/4 reset operation
L	Reset less operation (specifications operation)

24: In-phase SUS mode status	
0	Normal status
1	In-phase SUS mode status
2	Assist status at the cancellation

[16] DRV (PANEL DRIVE-POWER ON/OFF)

Panel drive-power ON/OFF (drive ON/OFF) is controllable.

Command Format	Operation		Remarks
	Effective Operation Modes	Function	
[DRV+S00]	Every time	DRIVE OFF	If a command is issued in Standby mode, and the unit is left unoperated for more than 10 seconds, the command will become void.
[DRV+S01]	Every time	DRIVE ON (default)	

Note: The function of the DRIVE OFF key on the remote control unit for servicing is the same as that of the DRVS00 command.
(A function equivalent to that of the DRVS01 command is not provided for the remote control unit for servicing.)

[17] FAY/FAN (ADJUSTMENT COMMANDS PERMISSION/PROHIBITION)

The commands FAY/FAN are for prohibiting/permitting panel/MTB-adjustment commands.

Command Format	Operation		Remarks
	Effective Operation Modes	Control	
[FAY]	Normal operation mode while the power is on	Adjustment command is valid.	For details, refer to the section “6.1 [3] FUNCTIONS WHEN ENTERING THE SERVICE FACTORY MODE”.
[FAN]	During FAY	Adjustment command is invalid.	

[18] FAJ/UAJ/CBU/BCP (BACKUP FUNCTION FOR ADJUSTMENT VALUE)

When the DIGITAL Assy is to be replaced, adjustment values can be copied from the backup EEPROM to the EEPROM of the Assy for service.

Command Format	Operation		Remarks
	Effective Operation Modes	Control	
[FAJ]	During FAY	To make the status of the EEPROM on the DIGITAL Assy "adjustment completed" and copy the data to the EEPROM for backup	This takes at least 350 msec.
[UAJ]		To make the status of the EEPROM on the DIGITAL Assy "adjustment not completed"	Only the status is changed, and the real data are not erased.
[CBU]		To make the status of the EEPROM on for backup "adjustment not completed"	Only the status is changed, and the real data are not erased. However, if the status of the EEPROM on the DIGITAL Assy is "adjustment completed," the data in the EEPROM of the DIGITAL Assy will be copied to the EEPROM for backup upon POF.
[BCP]		To copy the backup data from the EEPROM for backup to the EEPROM on the DIGITAL Assy	

6. SERVICE FACTORY MODE

6.1 OUTLINE OF THE SERVICE FACTORY MODE

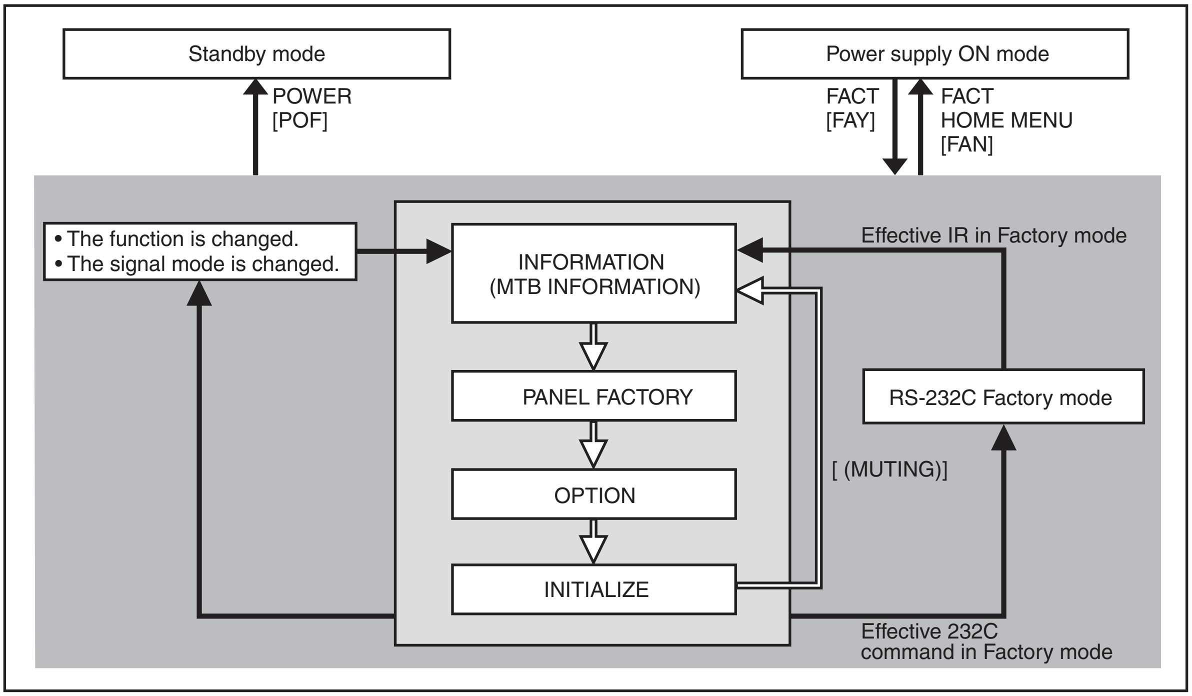
Operations during Service Factory mode are described here.

Before entering Factory mode of the PDP, make sure that the "HD AV Converter" setting on the PDP menu is set to "Disable." If it is set to "Enable," change it to "Disable" then enter Factory mode.

To confirm the "HD AV Converter" setting on the PDP menu, proceed as follows:
Select HOME MENU, Option, then HD AV Converter in HDMI Control Setting.

Note: If "HD AV Converter" is set to "Enable," the video/audio signals will not be displayed/output even if external equipment is connected via input connectors other than INPUT 4 of the PDP.

[1] SERVICE FACTORY MODE TRANSITION CHART


Standby mode
Power supply ON mode
POWER
[POF]
FACT
[FAY]
FACT
HOME MENU
[FAN]
• The function is changed.
• The signal mode is changed.
INFORMATION
(MTB INFORMATION)
Effective IR in Factory mode
PANEL FACTORY
RS-232C Factory mode
OPTION
[(MUTING)]
INITIALIZE
Effective 232C
command in Factory mode

[2] HOW TO ENTER/EXIT SERVICE FACTORY MODE

■ How to enter Service Factory Mode

By using a PDP service remote control)
- PDP service remote control : Press [FACTORY] key.

By issuing RS-232C commands)
- During normal Standby mode : Issue [PON] then [FAY].
- During normal operation mode : Issue [FAY].

■ How to exit Service Factory Mode

By using a PDP service remote control)
- PDP service remote control : press [FACTORY] key.
- Supplied remote control unit : press [HOME MENU] key.

By issuing RS-232C commands)
- Issue [FAN].

■ How to enter Service Factory Mode by Using the supplied Remote Control Unit

- From this model, can not enter the Service Factory Mode by operating the supplied remote control unit keys.

[3] FUNCTIONS WHEN ENTERING THE SERVICE FACTORY MODE

■ Fuctions whose setting are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered
(including when the “FAY” command is received) :

Function	Remarks
2-Screen Operation	Input function set on the main side is selected.
FREEZE	
Auto size, Side Mask	It is not performed during Factory mode.
ORBITER, Mask control	Central value operation (ORBITER)
Sleep Timer	Cancel the operation.
Room light sensor	Turn off the detecting operation (Setting data will be retained.)
Blue LED dimmer	Turn off the operation (Setting data will be retained.)
Setting of Parental Control	When this is turned off, the block of the screen is released.
Power Control	Turn off the operation (However, the setting maintains it.)
Image Position	Central value operation

Note: Enter the factory after cancelling ACI because the ACI operation setting OFF and not done.

■ User data

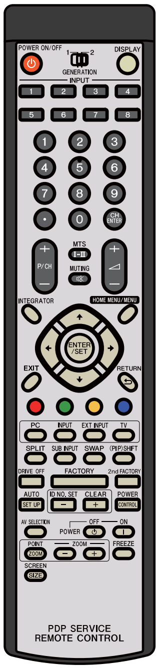
User data will be treated as follows :

- User data on picture-quality and audio-quality adjustments are not reflected, and factory-preset data are output (user data will be retained in memory). When the unit enters Service Factory mode, the current audio-quality adjustment data will be still be retained in memory.
- User-setting data will be applied to the various settings (items on the menus), signal formats, and the items that are associated with path change (HDMI settings, etc.).
- Data on screen (i.e., screen position; meaning clock dividers, and not including data on screen size).
  Are reset to the default values (data stored in memory will be retained).
  Screen size will be retained.

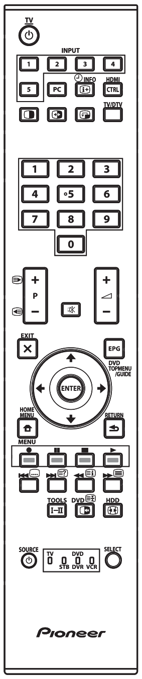
[4] REMOTE CONTROL CODE IN SERVICE FACTORY MODE

Remote Control Keys	Basic Functions	Remarks
MUTING	Switching the main items.	Shifting to the next main item (top).
⬇ (DOWN)	Switching the subtitled items.	Shifting downward to the next subtitiled item.
⬆ (UP)	Switching the subtitled items.	Shifting upward to the next upper layer.
⬅ (LEFT)	Decreasing the adjustment value.	Decreasing the adjustment value.
➡ (RIGHT)	Increasing the adjustment value.	Increasing the adjustment value.
ENTER/SET	Switching the layers.	Shifting downward or upward to the next lower or upper layer.
INPUT	Selecting INPUT.	Shifting the INPUT to the next function.
INPUTxx	Selecting INPUT.	Switching the INPUT to xx. (xx=1 to 7 etc)
CH+/P+	Increasing the channel number.	
CH-/P-	Decreasing the channel number.	
Numeric Keys	Function: TV	Function: TV (previously selected channel number is selected)
POWER	Power OFF.	Turning the power off.
FACTORY	Factory OFF (Factory mode)	In Factory mode, turning Factory mode off.
	Factory ON (Non-Factory mode).	In Non-Factory mode, turn Fuctory mode on.
HOME MENU	Menu ON.	In Factory mode, turn Factory mode off.
VOLUME+	Volume UP.	Increasing 10 the adjustment value. (PANEL FACTORY)
VOLUME-	Volume DOWN.	Decreasing 10 the adjustment value. (PANEL FACTORY)
DRIVE OFF (Note1)	Drive Mode OFF.	Turning Drive mode off.
INTEGRATOR	INTEGRATOR MENU ON.	Enter INTEGRATOR MODE.

(Note 1) When ten seconds have passed since the [DRIVE OFF] key was pressed at the standby, it becomes invalid.
Please press [POWER] key from the [DRIVE OFF] key pressing within ten seconds when you do power supply ON while driven OFF.


POWER ON/OFF
GENERATION
DISPLAY
INPUT
INTEGRATOR
HOME MENU / MENU
ENTER /SET
EXIT
RETURN
PC
INPUT
EXT INPUT
TV
SPLIT
SUB INPUT
SWAP
DRIVE OFF
FACTORY
2nd FACTORY
AUTO
ID NO. SET
CLEAR
POWER
AV SELECTION
POINT
ZOOM
FREEZE
SCREEN
PDP SERVICE
REMOTE CONTROL

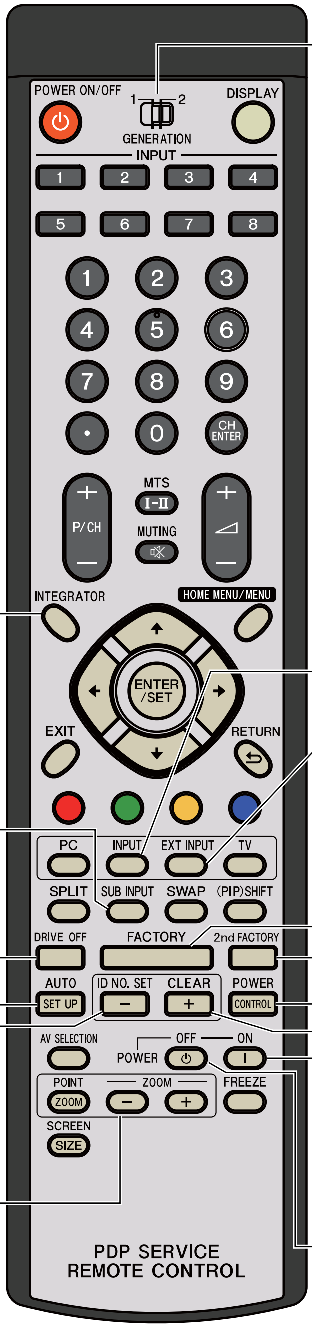
PDP service
remote control


TV
INPUT
INFO
HDMI CTRL
EXIT
EPG
ENTER
HOME MENU
RETURN
TOOLS
DVD
HDD
SOURCE
SELECT
Pioneer

Supplied
remote control

[5] PDP SERVICE REMOTE CONTROL

- The keys labeled with the same names on the service remote control unit have the same functions as those of the supplied remote control unit. (See "2.3 PANEL FACILITIES.")
- For the keys not provided on the supplied remote control unit, see the explanations below:


POWER ON/OFF
1
2
GENERATION
DISPLAY
INPUT
1
2
3
4
5
6
7
8
1
2
3
4
5
6
7
8
9
•
0
CH ENTER
P/CH
MTS
I-II
MUTING
INTEGRATOR
HOME MENU/MENU
ENTER /SET
EXIT
RETURN
PC
INPUT
EXT INPUT
TV
SPLIT
SUB INPUT
SWAP
(PIP)SHIFT
DRIVE OFF
FACTORY
2nd FACTORY
AUTO
SET UP
ID NO. SET
CLEAR
POWER
CONTROL
AV SELECTION
OFF
ON
POWER
POINT
ZOOM
FREEZE
SCREEN
SIZE
PDP SERVICE
REMOTE CONTROL

GENERATION switch for remote control codes
This switch selects the generation of remote control codes to be transmitted:
1: The old-generation codes are transmitted.
2: The new-generation codes are transmitted.
With this generation plasma display,
set the switch to 2.

INTEGRATOR
Press this key to enter Integrator mode.

INPUT
Press this key to cyclically change the input source.

EXT INPUT
Press this key to cyclically change only the external input source.

SUB INPUT
Not used with this model.

DRIVE OFF
Press this key to turn off the panel drive.
For details on how to cancel this command, see the explanation for the DRV command.

FACTORY
Press this key to enter Factory mode.

2nd FACTORY
Not used with this model.

AUTO SETUP
Use this key for automatic setup, such as the display position setting when an analog PC signal is input.

ID NO. SET
Not used with this model.

POWER CONTROL
Not used with this model.

CLEAR
Not used with this model.

POWER ON
Press this key to turn on the unit.
This key cannot turn the unit off.

POWER OFF
Press this key to turn off the unit.
This key cannot turn the unit on.

POINT ZOOM
Not used with this model.

ZOOM +/-
Not used with this model.

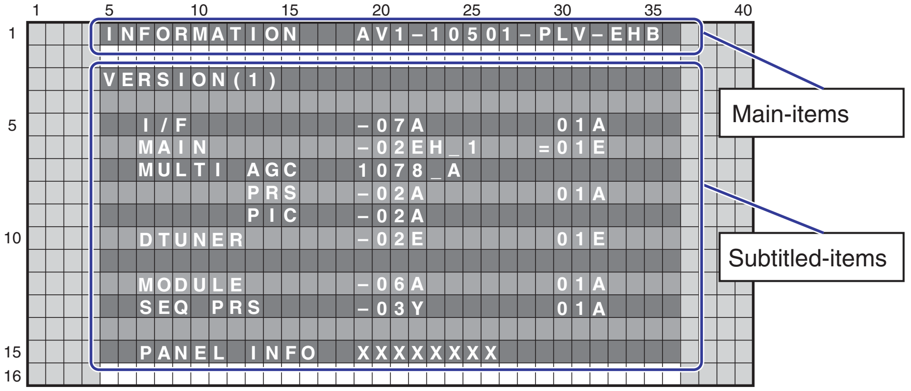
[6] FACTORY HIERARCHICAL TABLE

Large Item	Middle Item	Small Item	Variable / Adjustment Range	Remarks
6.2 [1] INFORMATION				
	[1-1] VERSION (1)			
	[1-2] VERSION (2)			
	[1-3] MAIN NG	CLEAR <=>	NO <=> YES	
	[1-4] TEMPERATURE			
	[1-5] HOUR METER	CLEAR <=>	NO <=> YES	
	[1-6] HDMI SIGNAL INFO 1			
	[1-7] HDMI SIGNAL INFO 2			
	[1-8] VDEC SIGNAL INFO 1			
	[1-9] VDEC SIGNAL INFO 2			
6.2 [2] PANEL FACTORY (+)				
	[2-1] PANEL INFORMATION			
	[2-2] PANEL WORKS			
	[2-3] POWER DOWN			
	[2-4] SHUT DOWN			
	[2-5] PANEL-1 ADJ (+)	VOL SUS <=>	000 to 255	
		VOL OFFSET <=>	000 to 255	
		VOL RST P <=>	000 to 255	
		VOL XPOFS1 <=>	000 to 255	
		VOL XPOFS2 <=>	000 to 255	
		VOL YKNOFS1 D <=>	000 to 255	
		VOL YKNOFS3 D <=>	000 to 255	
		VOL YKNOFS4 D <=>	000 to 255	
		VOL YKNOFSA D <=>	000 to 255	
		RESET1ST_KSB <=>	112 to 144	
		RESET2ND_KSB <=>	112 to 144	
		YSTL_1SF_KSB <=>	112 to 144	
		YSTL_1SF_HZ <=>	112 to 144	
		XSUS_1ST_B <=>	112 to 144	
		YSUS_2ND_B <=>	112 to 144	
		XSUS_3RD_B <=>	112 to 144	
		YSUS_B <=>	112 to 144	
		XSUS_B <=>	112 to 144	
		YSTL_KSB <=>	112 to 144	
		YSTL_HZ <=>	112 to 144	
		YSTL_2SF_KSB <=>	112 to 144	
		YSTL_2SF_HZ <=>	112 to 144	
		YSTL_FMR_KSB <=>	112 to 144	
		SCAN ADRS ADJ <=>	112 to 144	
		SUS FREQ <=>	<=> MODE 1 to MODE 8 <=>	
	[2-6] PANEL-2 ADJ (+)	R-HIGH <=>	000 to 999	
		G-HIGH <=>	000 to 999	
		B-HIGH <=>	000 to 999	
		R-LOW <=>	000 to 999	
		G-LOW <=>	000 to 999	
		B-LOW <=>	000 to 999	
		ABL <=>	000 to 255	
	[2-7] PANEL FUNCTION (+)	R-LEVEL <=>	<=> LV-0 to LV-7 <=>	
		G-LEVEL <=>	<=> LV-0 to LV-7 <=>	
		B-LEVEL <=>	<=> LV-0 to LV-7 <=>	
		ADDRESS L1 <=>	<=> PH0 to PH9 <=>	
		ADDRESS L2 <=>	<=> PH0 to PH9 <=>	
		ADDRESS L3 <=>	<=> PH0 to PH9<=>	
		ADDRESS L4 <=>	<=> PH0 to PH9 <=>	
		ADDRESS U1 <=>	<=> PH0 to PH9 <=>	
		ADDRESS U2 <=>	<=> PH0 to PH9 <=>	
		ADDRESS U3 <=>	<=> PH0 to PH9 <=>	
		ADDRESS U4 <=>	<=> PH0 to PH9<=>	
		STK MODE <=>	OFF <=> MODE1 to MODE8 <=>	
		FULL BLACK <=>	MODE1 <=> OFF	
		PANEL RX <=>	000 to 999	
		PANEL RY <=>	000 to 999	
		PANEL GX <=>	000 to 999	
		PANEL GY <=>	000 to 999	
		PANEL BX <=>	000 to 999	
		PANEL BY <=>	000 to 999	
		CLS R <=>	000 to 255	
		CLS G <=>	000 to 255	
		CLS B <=>	000 to 255	

Large Item	Middle Item	Small Item	Variable / Adjustment Range	Remarks
6.2 [2] PANEL FACTORY (+)				
	[2-8] ETC. (+)	BACKUP DATA <=>	NO OPRT <=> TRANSFER/ERR	
		DIGITAL EEPROM <=>	NO OPRT <=> DELETE/REPAIR	
		PD INFO. <=>	NO OPRT <=> CLEAR	
		SD INFO. <=>	NO OPRT <=> CLEAR	
		HR-MTR INFO. <=>	NO OPRT <=> CLEAR	
		PM/B1-B5 <=>	NO OPRT <=> CLEAR	
		P COUNT INFO. <=>	NO OPRT <=> CLEAR	
		MAX TEMP. <=>	NO OPRT <=> CLEAR	
		MIRROR <=>	OFF <=> MODE1 to MODE3 <=>	
		CLS <=>	OFF <=> ON	
	[2-9] RASTER MASK SETUP (+)	MASK OFF	<=> 50V <=> 60V <=> 60P <=> 72V <=> 75V1 <=> 75V2 <=>	
		RST MASK 01 <=>		
		• • •		
		RST MASK 25 <=>		
	[2-10] PATTERN MASK SETUP (+)	MASK OFF	<=> 50V <=> 60V <=> 60P <=> 72V <=> 75V1 <=> 75V2 <=>	
		PTN MASK 01 <=>		
		• • •		
		PTN MASK 49 <=>		
	[2-11] COMBI MASK SETUP (+)	MASK OFF	<=> 50V <=> 60V <=> 60P <=> 72V <=> 75V1 <=> 75V2 <=>	
		CMB MASK 01 <=>		
		• • •		
		CMB MASK 17 <=>		
6.2 [3] OPTION				
	[3-1] CH PRESET <=>		DISABLE <=> ENABLE	Exclusively used for production line
	[3-2] Digital AFT <=>		DISABLE <=> ENABLE	Exclusively used for production line (*1)
	[3-3] SYNC DET (+)			for the technical analysis
	[3-4] CTI (+)			for the technical analysis
6.2 [4] INITIALIZE				
	[4-1] SIDE MASK LEVEL (+)	SIDE MASK LEVEL <=>		
	[4-2] FINAL SETUP (+)	DATA RESET <=>	NO <=> YES	
	[4-3] DTB SERVICE MODE (+)	MODE SHIFT <=>	NO <=> YES	for the technical analysis (*1, *2)
	[4-4] Wide XGA AUTO <=>		DISABLE <=> ENABLE	for the technical analysis
	[4-5] AUTO ADJUSTMENT (+)	AUTO ADJUST. <=>	NO <=> YES	

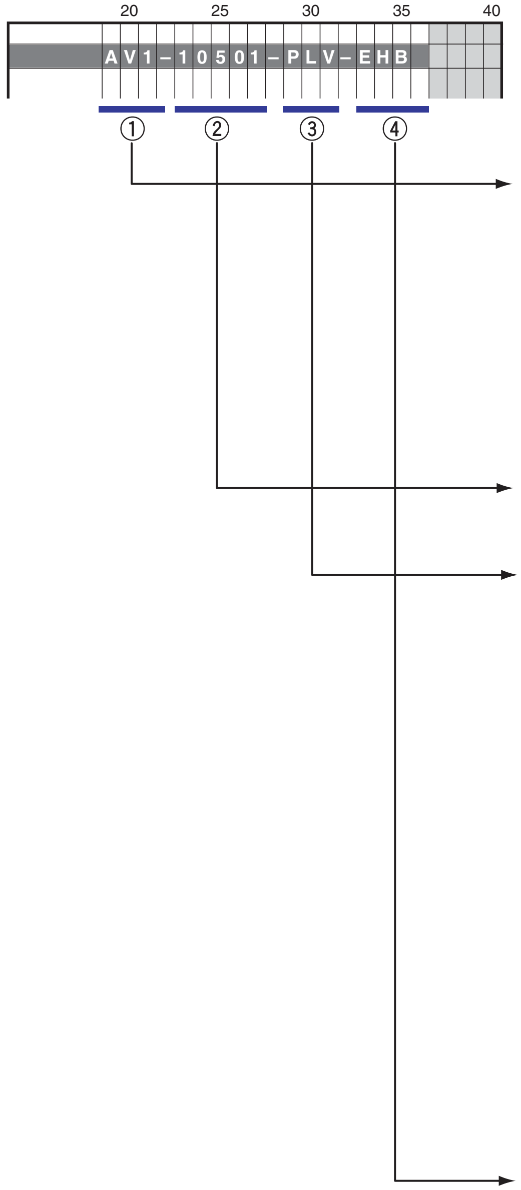
(*1): PDP-LX5090H only
(*2): Exit the Service Factory Menu and enter the Digital Tuner Service menu.

[7] INDICATIONS IN SERVICE FACTORY MODE



```
INFORMATION      AV1-10501-PLV-EHB
VERSION(1)

  I/F            -07A        01A
  MAIN           -02EH_1    =01E
  MULTI  AGC     1078_A
         PRS     -02A        01A
         PIC     -02A
  DTUNER         -02E        01E

  MODULE         -06A        01A
  SEQ  PRS       -03Y        01A

  PANEL  INFO    XXXXXXXX
```

Main-item indications



① Input function

Input Functions	OSD
AV 1 to 5	AV 1 to 5
Terrestrial Wave (Analog)	AIR
Terrestrial Wave (Digital)	ARD
Satellite didital broadcasting (PDP-LX5090H only)	SAT
Cable (Digital)	CBD
Home Media Gallery	HMG
PC	PC

② SIG mode and Screen size

Note: See SIG-Mode Tables. (See next page.)

③ Color system and Signal type

Color System and Signal Type	OSD	
	At Composite Input	At S-connector Input
NTSC	NTV	NTS
PAL	PLV	PLS
PAL M	PMV	PMS
PAL N	PNV	PNS
PAL 60	P6V	P6S
SECAM	SCV	SCS
4.43 NTSC	4NV	4NS
BLACK/WHITE	BWV	BWS
Y/CB/CR	CBR	
Y/PB/PR	PBR	
RGB	RGB	
Digital Video signal	DIG	

④ Option (Destination, Panel Generation, etc.)

Options	OSD
PDP-LX5090/6090H	EHB
PDP-LX5090/6090D	ETB

② SIG Mode and Screen size (by User is displayed)

1st and 2nd characters : Resolution of the input signal
3rd and 4th characters : Refresh rate of the input signal
5th character : Selection of the screen size

■ Input signal mode table for video signals (resolutions and V frequencies)

1st to 4th Character		Signal Type	Fv (Hz)	Fh (kHz)
10	50	SDTV*625i	50.000	15.750
	60	SDTV*525i	60.000	15.750
20	50	SDTV*625p	50.000	31.500
	60	SDTV*525p	60.000	31.500
30	50	HDTV*1125i	50.000	33.750
	60	HDTV*1125i	60.000	33.750
40	50	HDTV*750p	50.000	45.000
	60	HDTV*750p	60.000	45.000
50	24	HDTV*1125p	24.000	27.000
	50	HDTV*1125p	50.000	56.250
	60	HDTV*1125p	60.000	67.500

Fv: Vertical Frequency, Fh: Horizontal Frequency

■ Input signal mode table for PC signals (resolutions and V frequencies)

1st to 4th Character		Signal Type	Fv (Hz)	Fh (kHz)
C1	70	720 x 400	70.087	31.469
C2	60	640 x 480	59.940	31.469
C4	60	800 x 600	60.317	37.879
C6	60	1280 x 720	60.000	44.800
C7	60	1024 x 768	60.004	48.363
C9	60	1360 x 768	60.015	47.712
D6	60	1280 x 1024	60.000	64.000

Fv: Vertical Frequency, Fh: Horizontal Frequency

■ Current selection of the screen size

5th Character	GUI Notation	VIDEO	PC	Remarks
0	DOT BY DOT	●	–	
1	4:3	●	●	
2	FULL	●	●	
3	ZOOM	●	–	
4	CINEMA	●	–	
5	WIDE	●	–	
6	FULL 14:9	●	–	
7	CINEMA 14:9	●	–	
9	WIDE1	●	–	
A	WIDE2	●	–	

●: supported, –: unsupported

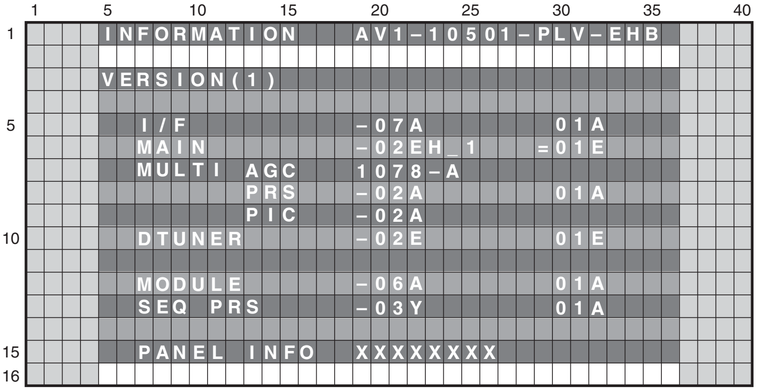
6.2 DETAILS OF FACTORY MENU

[1] INFORMATION

■ Operation items

No.	Function	Content	RS-232C Command
[1-1]	VERSION (1)	The Flash memory versions for each device are displayed.	QS1
[1-2]	VERSION (2)	The Flash memory versions for each device are displayed.	QSE
[1-3]	MAIN NG	The Shutdown NG information and Event Times in the MTB section are displayed.	QNG
[1-4]	TEMPERATURE	The present temperature and the FAN rotating status are displayed.	–
[1-5]	HOUR METER	The accumulation power ON count of the panel is displayed.	–
[1-6]	HDMI SIGNAL INFO 1	The status registers of HDMI receiver are displayed with hexadecimal.	–
[1-7]	HDMI SIGNAL INFO 2		
[1-8]	VDEC SIGNAL INFO 1	Display the signal information input to VDEC.	–
[1-9]	VDEC SIGNAL INFO 2		

[1-1] VERSION (1)



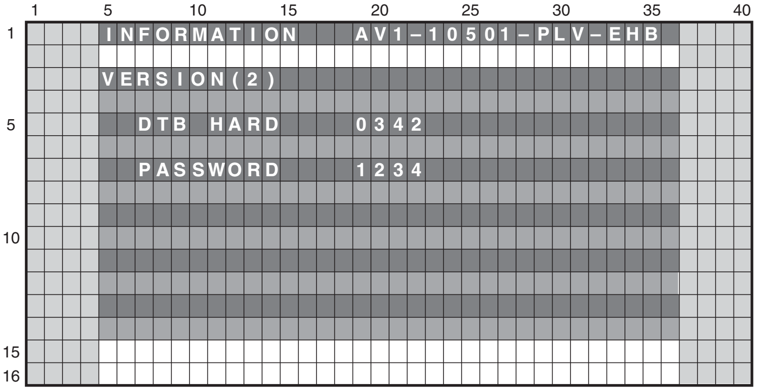
```
    INFORMATION   AV1-10501-PLV-EHB

    VERSION(1)

      I/F           -07A       01A
      MAIN          -02EH_1   =01E
      MULTI AGC     1078-A
            PRS     -02A       01A
            PIC     -02A
      DTUNER        -02E       01E

      MODULE        -06A       01A
      SEQ PRS       -03Y       01A

      PANEL INFO  XXXXXXXX
```

Display Item	Meaning	Display Example (Program)	Display Example (Boot)
I/F	I/F microcomputer	-07A	01A
MAIN	Main microcomputer	-02EH_1	=01E
MULTI AGC	AGC data of Multi processor	1078-A	
MULTI PRS	Program of Multi processor	-02A	01A
MULTI PIC	Picture quality data of Multi processor	-02A	
DTUNER (*1)	Software program of the Digital tuner	-02E	01E
MODULE	Module microcomputer	-06A	01A
SEQ PRS	Program of Sequence processor	-03Y	01A

Display Item	Meaning
PANEL INFO	It displays the generation of the panel, inchage and the type of the panel. For details on display values and settings, see "10: Panel Information" in "5.9 [1] QS1 (PANEL STATUS)."

(*1): PDP-LX5090H only

[1-2] VERSION (2)


1
5
10
15
20
25
30
35
40
1
5
10
15
16

INFORMATION AV1–10501–PLV–EHB

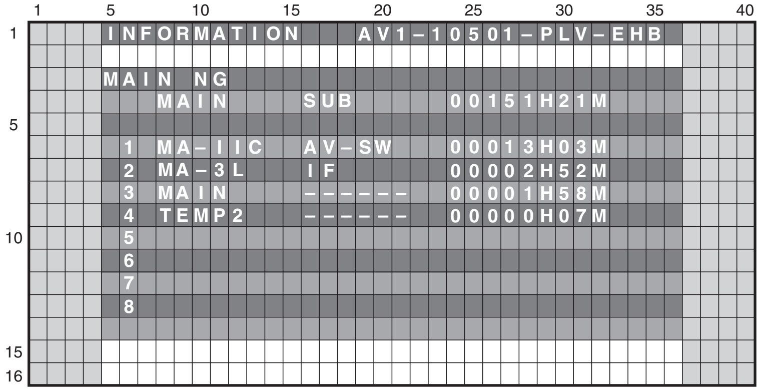
VERSION(2)

DTB HARD 0342

PASSWORD 1234

Display Item	Meaning	Display Example
DTB HARD	DTB Hardware Version	0342
PASSWORD	User setting password	1234

[1-3] MAIN NG

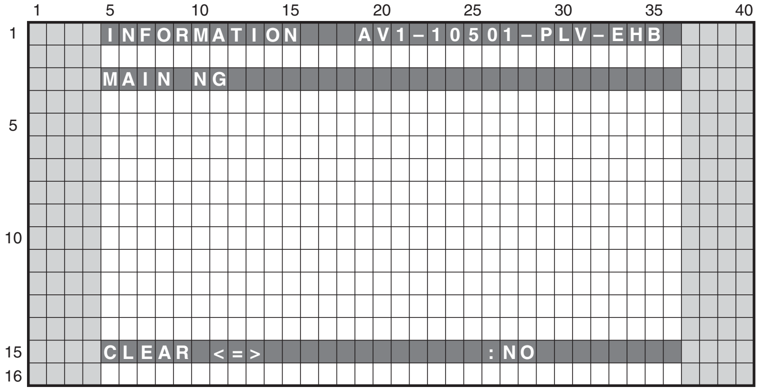


```
    INFORMATION   AV1–10501–PLV–EHB

    MAIN NG
       MAIN    SUB     00151H21M

     1 MA–IIC  AV–SW   00013H03M
     2 MA–3L   IF      00002H52M
     3 MAIN    ––––––  00001H58M
     4 TEMP2   ––––––  00000H07M
     5
     6
     7
     8
```

MTB side's Shutdown NG information

Error Display: MAIN	Error Display: SUB	Cause of Shutdown
AUDIO		Short-circuit of the speaker terminal or failure of audio amplifier.
	AUDIO	Short-circuit of the speaker terminal or failure signal of audio amplifier (MAIN) (PDP-LX5090H only)
	OTW	Short-circuit of the speaker terminal or failure signal of audio amplifier (IF) (PDP-LX5090H only)
MODULE	----	Serial communication error of Module microcomputer.
MA-3L		3-wire Serial Communication error of Main microcomputer.
	IF	Communication error of IF microcomputer
	MULTI	Main communication error of Multi Processor
MA-IIC		IIC Communication error of Main microcomputer
	FE1	Tuner 1
	MSPMAP	MSP/MAP
	AV-SW	AV Switch
	RGB-SW	RGB Switch
	VDEC	Main VDEC
	SDRAM	VDEC - SDRAM
	ADC	AD/PLL
	HDMI	HDMI
	DEMOD	COFDEM (PDP-LX5090 only)
MAIN	----	Communication error of Main microcomputer
FAN		FAN abnormal
	FAN2	FAN2 abnormal stop
TEMP2	----	Abnormally high temperature
DTUNER		Failure in Digital Tuner
	PS/RST	DTB Starting error
	RETRY	Communication error with DTB (PDP-LX5090H only)
	DEVICE	DTB device error (PDP-LX5090H only)
	DE-FE	DTB device error (Tuner 1) (PDP-LX5090H only)
	D-ANT	Abnormally in DTB antenna
	DTVAPP	DTB device error (Application) (PDP-LX5090H only)
	DEMOD	DTB device error (COFDEM) (PDP-LX5090H only)
	DE-FES	DTB device error (Tuner S2) (PDP-LX5090H only)
	DEMONS	DTB device error (S2DEMOD) (PDP-LX5090H only)
	DE-LNB	DTB device error (LNB) (PDP-LX5090H only)
RST-MA		Abnormally in MTB power
	M-DCDC	Abnormally in ASIC power (DC-DC)
	RELAY	Power decrease of RELAY power
MA-EEP	----	Main EEPROM communication error

- **Clear the MAIN NG history**



INFORMATION AV1–10501–PLV–EHB

MAIN NG

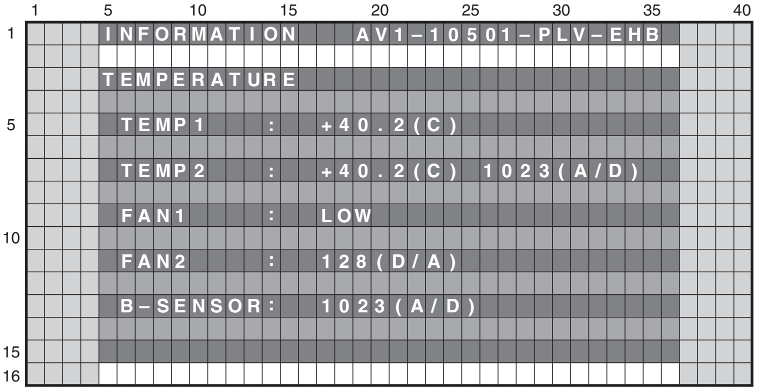
CLEAR <=> :NO

Operation:

- Even if [⬅] key or [➡] key is pressed, {CLEAR <=> :YES} ⇔ {CLEAR <=> :NO} is repeated.
- Selecting <NO> then pressing the ENTER/SET key will return the screen to the next higher layer, without doing anything.
- Selecting <YES> then holding the ENTER/SET key pressed for 5 seconds will clear the NG log data that are managed in MTB then return the screen to the next higher layer.

[1-4] TEMPERATURE

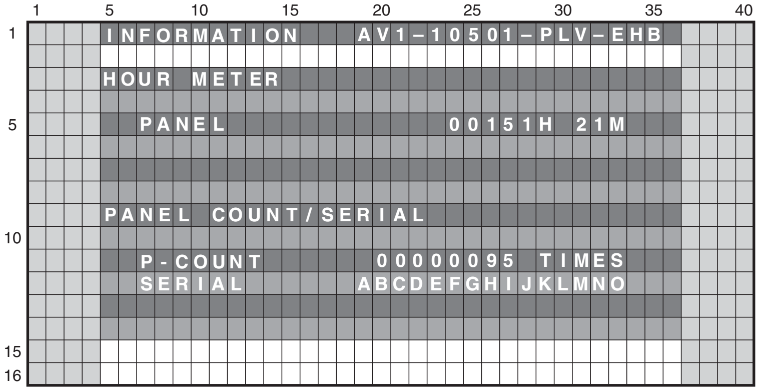
A present temperature and the FAN rotation are displayed.
If either [⬅] key or [➡] key is pressed, the display data is refreshed.



```
INFORMATION    AV1-10501-PLV-EHB

TEMPERATURE

  TEMP1     :   +40.2(C)

  TEMP2     :   +40.2(C)  1023(A/D)

  FAN1      :   LOW

  FAN2      :   128(D/A)

  B-SENSOR:     1023(A/D)
```

Display Item	Meaning
TEMP1	The temperature of the sensor on the panel side is displayed by the Centigrade (C).
TEMP2	The temperature conversion display is done with 10 bit the A/D input value of IF microcomputer. It is displayed by both the Centigrade (C) and 8 bit A/D value. Note: When temperature (C) of the sensor becomes more than a specified temperature, the shutdown start of processing.
FAN1	The value of the FAN rotating state is displayed. STOP: stopped, LOW: slow speed, HIGH: high speed.
FAN2	The value of the rotation state of FAN is displayed. During a rotation of FAN, 8bit D/A value output from IF microcomputer is displayed. It is displayed with OFF during a stop.
B-SENSOR	The value that indicated the degree of brightness input into an Room light sensor is displayed. AD value when the output of the Room light sensor was input into IF microcomputer is displayed.

[1-5] HOUR METER

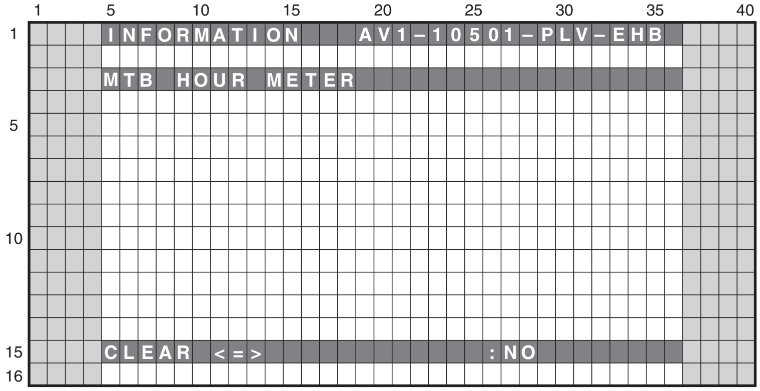


```
INFORMATION     AV1-10501-PLV-EHB

HOUR METER

   PANEL                 00151H 21M



PANEL COUNT/SERIAL

   P-COUNT          00000095 TIMES
   SERIAL           ABCDEFGHIJKLMNO
```

Display Item	Meaning	Display Example
PANEL	HOUR METER of the panel	00151H 21M
P-COUNT	Accumulation power ON count of the panel	00000095 TIMES
SERIAL	Serial number of the product	ABCDEFGHIJKLMNO

• MTB HOUR METER

In HOUR METER screen on Factory Menu, press the [ENTER/SET] key, and then it moves to the screen to clear MTB HOUR METER. (MTB HOUR METER is cleared only.)

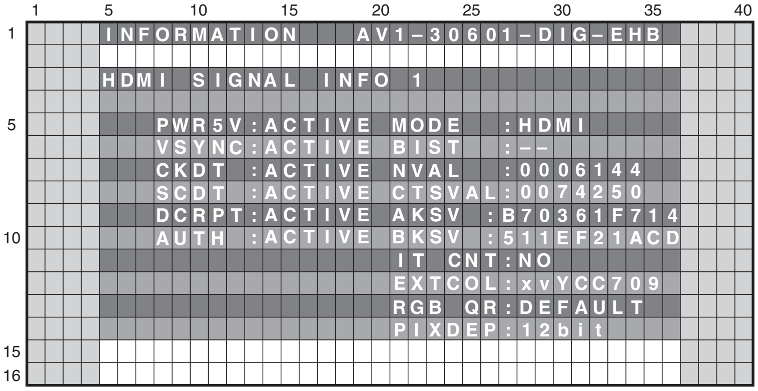


```
INFORMATION     AV1-10501-PLV-EHB

MTB HOUR METER











CLEAR <=>              :NO
```

Operation:

- Even if [⬅] key or [➡] key is pressed, {CLEAR <=> :YES} ⇔ {CLEAR <=> :NO} is repeated.
- Selecting <NO> then pressing the ENTER/SET key will return the screen to the next higher layer, without doing anything.
- Selecting <YES> then holding the ENTER/SET key pressed for 5 seconds will clear the HOUR METER (HOUR METER while the MAIN NG screen is displaed) data that are managed in MTB then return the screen to the next higher layer.

[1-6] HDMI SIGNAL INFO 1

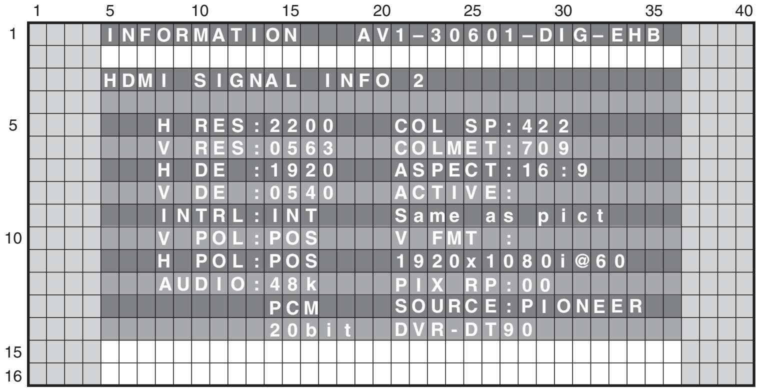


```
INFORMATION   AV1-30601-DIG-EHB

HDMI SIGNAL INFO 1

  PWR5V:ACTIVE MODE  :HDMI
  VSYNC:ACTIVE BIST  :--
  CKDT :ACTIVE NVAL  :0006144
  SCDT :ACTIVE CTSVAL:0074250
  DCRPT:ACTIVE AKSV  :B70361F714
  AUTH :ACTIVE BKSV  :511EF21ACD
               IT CNT:NO
               EXTCOL:xvYCC709
               RGB QR:DEFAULT
               PIXDEP:12bit
```

Displays the input signal information of HDMI terminal

Display Item	Meaning
PWR5V	+5 V power detection (18 pin of HDMI terminal)
VSYNC	VSYNC detection
CKDT	Clock detection
SCDT	SYNC detection
DCRPT	HDCP decryption status
AUTHEN	HDCP authentication status
MODE	HDMI mode status
BIST	HDCP Key status (Always display it with "--".)
NVAL	N value
CTSVAL	CTS value
AKSV	Shadow AKSV value
BKSV	Shadow BKSV value
IT CNT	IT content (AVI info)
EXTCOL	Extension calorimetry (AVI info)
RGV QR	RGB range (AVI info)
PIXDEP	Number of pixel/bit

[1-7] HDMI SIGNAL INFO 2



```
INFORMATION    AV1–30601–DIG–EHB

HDMI SIGNAL INFO 2

   H RES:2200   COL SP:422
   V RES:0563   COLMET:709
   H DE :1920   ASPECT:16:9
   V DE :0540   ACTIVE:
   INTRL:INT    Same as pict
   V POL:POS    V FMT :
   H POL:POS    1920x1080i@60
   AUDIO:48k    PIX RP:00
         PCM    SOURCE:PIONEER
         20bit  DVR-DT90
```

Displays input signal status of HDMI terminal

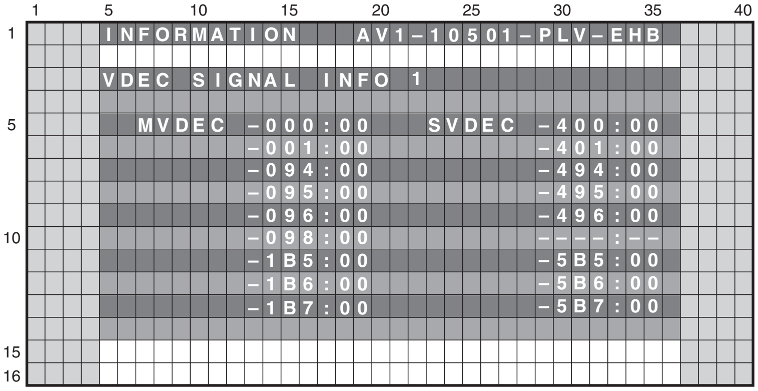
Display Item	Meaning
H RES	Number of horizontal pixels
V RES	Number of vertical lines
H DE	Number of effectively horizontal pixels
V DE	Number of effectively vertical lines
INTRL	Interlace (=INT) or progressive (=PRG)
V POL	VSYNC polarity
H POL	HSYNC polarity
AUDIO (first line)	Sampling frequency. (ex. DVD: 48kHz, CD: 44.1kHz) *1
AUDIO (second line)	Audio format PCM (PCM) or No PCM (no PCM)
AUDIO (third line)	Quantization bit
COL SP	Color space (AVI Info) 422 or 444 or RGB *2
COLMET	Calorimetry (AVI Info)
ASPECT	Aspect (AVI Info)
ACTIVE	Active format (AVI Info)
V FMT	Video format (AVI Info)
PIX RP	Pixel count
SOURCE (first line)	Vendor name of the emission device
SOURCE (second line)	Model name of the emission device

*1: Confirm if this item is displayed when the audio is not outputted.
*2: If may not match to the state of source devices when the color is abnormal.

Display of HDMI FACTORY and correspondence of resolution
Please confirm the following items when the picture doesn't come out.

Input Signal	FACTORY Display				
	H RES	V RES	H DE	V DE	V FMT
480i (525i)@60	858	262 or 263	720	240	720x480i@60
480p (525p)@60	858	525	720	480	720x480p@60
1080i (1125i)@60	2200	562 or 563	1920	540	1920x1080i@60
720p (750p)@60	1650	750	1280	720	1280x720p@60
1080p (1125p)@60	2200	1125	1920	1080	1920x1080p@60
1080p (1125p)@24	2750	1125	1920	1080	1920x1080p@24
576i (625i)@50	864	312 or 313	720	288	720x576i@50
576p (625p)@50	864	625	720	576	720x576p@50
1080i (1125i)@50	2640	562 or 563	1920	540	1920x1080i@50
720p (750p)@50	1980	750	1280	720	1280x720p@50
1080p (1125p)@50	2640	1125	1920	1080	1920x1080p@50

[1-8] VDEC SIGNAL INFO 1

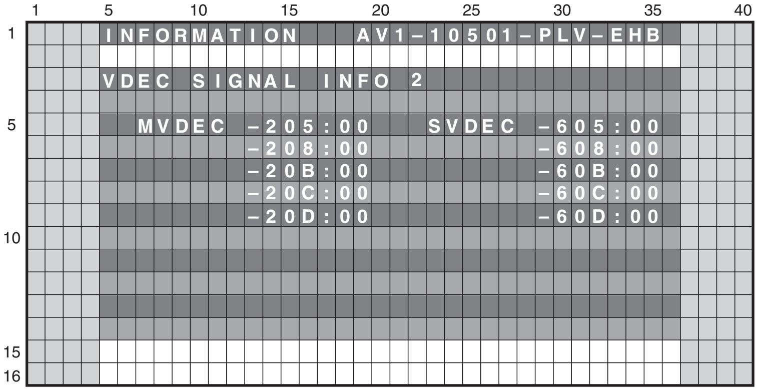


```
INFORMATION    AV1-10501-PLV-EHB

VDEC  SIGNAL  INFO 1

  MVDEC  -000:00     SVDEC  -400:00
         -001:00            -401:00
         -094:00            -494:00
         -095:00            -495:00
         -096:00            -496:00
         -098:00            ----:--
         -1B5:00            -5B5:00
         -1B6:00            -5B6:00
         -1B7:00            -5B7:00
```

Displays signal status that is input to VDEC.

Device	Sub Address (Main screen)	Sub Address (Sub screen)	Meaning
VDEC	000h	400h	Line system distinction result
	001h	401h	VTR distinction result
	094h	494h	Slot number
	095h	495h	Color system distinction result
	096h	496h	ACC coefficient
	098h	---	3D YC flag
	1B5h	5B5h	MV detection 1
	1B6h	5B6h	MV detection 2
	1B7h	5B7h	MV detection 3

[1-9] VDEC SIGNAL INFO 2



```
INFORMATION    AV1-10501-PLV-EHB

VDEC  SIGNAL  INFO 2

  MVDEC  -205:00     SVDEC  -605:00
         -208:00            -608:00
         -20B:00            -60B:00
         -20C:00            -60C:00
         -20D:00            -60D:00
```

Displays signal status that is input to VDEC.

Device	Sub Address (Main screen)	Sub Address (Sub screen)	Meaning
VDEC	205h	605h	CC detection 1
	208h	608h	CC detection 2
	20Bh	60Bh	CC-CRI detection
	20Ch	60Ch	XDS content advisory 0
	20Dh	60Dh	XDS content advisory 1

[2] PANEL FACTORY (+)

■ Operation Items

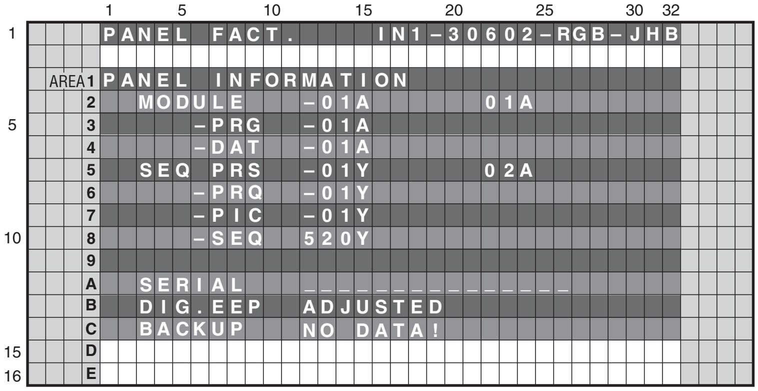
This is the menu screen for the adjustment of the panel. Data acquisition and value adjustment can be performed for the following items:

No.	Indication	Description of functions
[2-1]	PANEL INFORMATION	Data, such as the version of the microcomputer of the panel, product serial number, and statuses of EEPROM for adjustment values for the main unit and for backup, are displayed.
[2-2]	PANEL WORKS	Operation data, such as accumulated pulse-meter count, accumulated hour-meter count, accumulated power-on count, and the temperature detected by the sensor, are displayed.
[2-3]	POWER DOWN	The power-down history is displayed.
[2-4]	SHUT DOWN	The shutdown history of the panel section is displayed.
[2-5]	PANEL-1 ADJ (+)	Settings of the driving voltage and AM radio prevention can be performed.
[2-6]	PANEL-2 ADJ (+)	White balance and ABL (power consumption) for the panel can be set.
[2-7]	PANEL FUNCTION (+)	Setting of the panel-degradation correction-level and various functions are displayed.
[2-8]	ETC. (+)	Copying of backup data, clearing of various settings, and changing of settings for functions for which setting data are not stored upon last update are performed.
[2-9]	RASTER MASK SETUP (+)	The mask indication (RASTER) can be set and indicated.
[2-10]	PATTERN MASK SETUP (+)	The mask indication (PATTERN) can be set and indicated.
[2-11]	COMBI MASK SETUP (+)	The mask indication (COMBI) can be set and indicated.

■ Details of indications in each layer

[2-1] PANEL INFORMATION

- Data, such as the version of the microcomputer of the panel, product serial number, and statuses of digital EEPROM for storing the adjustment values and for backup EEPROM, are displayed. No other layers are nested below this layer, and there are no adjustment items.



```
PANEL FACT.    IN1-30602-RGB-JHB

PANEL INFORMATION
  MODULE   -01A      01A
     -PRG  -01A
     -DAT  -01A
  SEQ PRS  -01Y      02A
     -PRQ  -01Y
     -PIC  -01Y
     -SEQ  520Y

  SERIAL   _______________
  DIG.EEP  ADJUSTED
  BACKUP   NO DATA!
```

■ Key operation

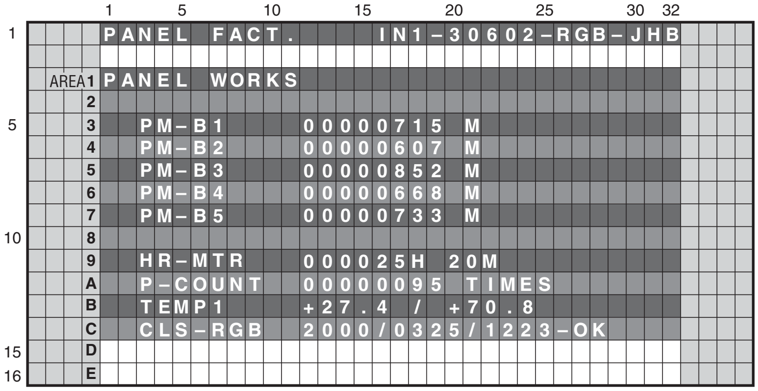
<DOWN> : Shifting to PANEL WORKS
<UP> : Shifting to COMBI MASK SETUP (+)
<L/R> : Updating displayed information

■ Contents of the Display item

MODULE : The version of data written in the Module microcomputer is indicated.
-PRG : The program version of the Module microcomputer is indicated.
-DAT : The data version of the Module microcomputer is indicated.
SEQ PRS : The version of data written in the Sequence LSI is indicated.
-PRG : The program version of the Sequence LSI is indicated.
-PIC : The Picture-data version of the Sequence LSI is indicated.
-SEQ : The sequence-data version of the Sequence LSI is indicated.
SERIAL : The serial number of the module is indicated.
DIG.EEP : The adjusted status of the EEPROM that is mounted on the DIGITAL Assy is indicated.
BACKUP : The adjusted status of the EEPROM for backup that is mounted on the SENSOR Assy is indicated.

[2-2] PANEL WORKS

- Data on operations, such as the accumulated pulse-meter counts, hour-meter count, power-on count, and temperature detected by the sensor, are displayed. No other layers are nested below this layer, and there are no adjustment items.



```
PANEL FACT.    IN1-30602-RGB-JHB

PANEL WORKS

  PM-B1    00000715 M
  PM-B2    00000607 M
  PM-B3    00000852 M
  PM-B4    00000668 M
  PM-B5    00000733 M

  HR-MTR   000025H 20M
  P-COUNT  00000095 TIMES
  TEMP1    +27.4 / +70.8
  CLS-RGB  2000/0325/1223-OK
```

Temperature unit is " °C (Centigrade) ".

■ Key operation

<DOWN> : Shifting to POWER DOWN
<UP> : Shifting to PANEL INFORMATION
<L/R> : Updating displayed information

■ Contents of the Display item

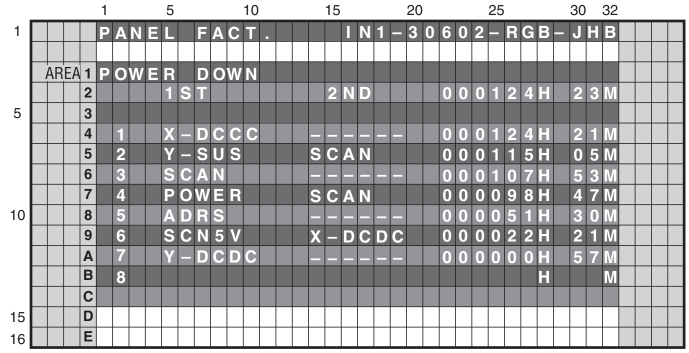
- PM-B1 to B5: The accumulated pulse-meter counts for the 5 blocks on the screen are indicated. (the lowest-order digit represents millions of pulses.)
- HR-MTR: The hour-meter value (accumulated power-on hours) is indicated.
- P-COUNT: The accumulated power-on count is indicated.
- TEMP1: The current panel temperature and the historical maximum temperature recorded in memory are indicated. The range of temperature indication is from -50.0 to +99.9. (The temperature unit is " °C (Centigrade) ".)
- CLS-RGB: Data obtained from the color sensor are displayed in the order R, G, and B, with the status indication at the end.

CLS Status	OSD Indication
Function OFF	-OFF
Color sensor module non connection	-NC
Data abnormality	-INV
Data normal	-OK

Note:
Turning ON the functions of the color sensor can be performed in the ETC(+) layer.

[2-3] POWER DOWN

- The power-down history is displayed. No other layers are nested below this layer.



```
PANEL FACT.    IN1-30602-RGB-JHB

POWER DOWN
    1ST       2ND    000124H 23M

 1  X-DCCC   ------  000124H 21M
 2  Y-SUS    SCAN    000115H 05M
 3  SCAN     ------  000107H 53M
 4  POWER    SCAN    000098H 47M
 5  ADRS     ------  000051H 30M
 6  SCN5V    X-DCDC  000022H 21M
 7  Y-DCDC   ------  000000H 57M
 8                         H   M
```

■ Key operation

<DOWN> : Shifting to SHUT DOWN
<UP> : Shifting to PANEL WORKS
<L/R> : Updating displayed information

■ Contents of the Display item

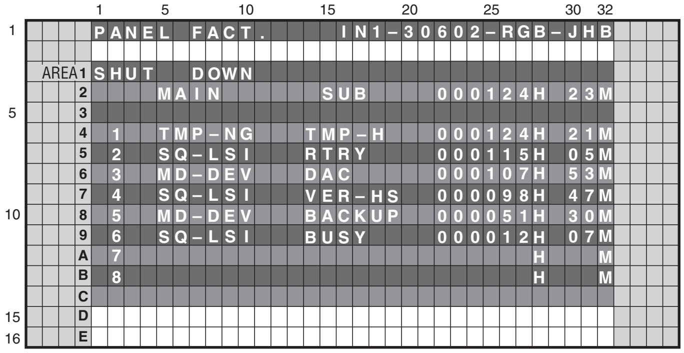
- The last most 8 power-down histories are displayed with the hour-meter values that indicate the hours when power-downs occurred.
- When power-down is confirmed, the factor is displayed as "1st", "2nd", according to the accuracy order.
- The power-down history is not recorded when the power-down occurred at the same place and same time.

<Causes of power-down and corresponding OSD indications>

Cause of power-down	OSD Indication	Cause of power-down	OSD Indication
POWER SUPPLY Unit	P-PWR	ADDRESS Assy	ADRS
SCAN Assy	SCAN	DC/DC converter for X drive	X-DCDC
5 V power for SCAN	SCN5V	X-SUS	X-SUS
DC/DC converter for Y drive	Y-DCDC	DIG-DCDC	D-DCDC
Y-SUS	Y-SUS	Unknown	UNKNOW

[2-4] SHUT DOWN

- The shutdown history of panel section is displayed. No other layers are nested below this layer, and there are no adjustment items.



```
PANEL FACT.       IN1-30602-RGB-JHB

SHUT  DOWN
    MAIN          SUB     000124H 23M

 1  TMP-NG    TMP-H       000124H 21M
 2  SQ-LSI    RTRY        000115H 05M
 3  MD-DEV    DAC         000107H 53M
 4  SQ-LSI    VER-HS      000098H 47M
 5  MD-DEV    BACKUP      000051H 30M
 6  SQ-LSI    BUSY        000012H 07M
 7                              H    M
 8                              H    M
```

■ Key operation

<DOWN> : Shifting to PANEL-1 ADJ (+)
<UP> : Shifting to POWER DOWN
<L/R> : Updating displayed information

■ Contents of the Display item

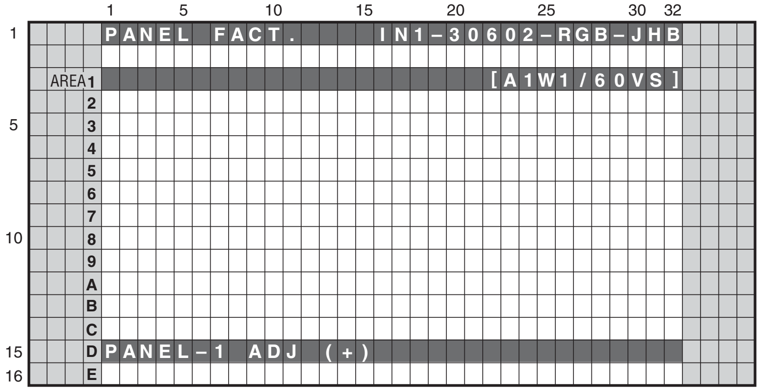
- The shutdown history is displayed. The last most 8 shutdown histories are displayed with the hour-meter values that indicate the hours when shutdowns occurred.
- When there is detail information when shutdown occurred, the possible defective part is displayed as Sub information.
- The shutdown history is not recorded when the shutdown occurred at the same place and same time.

<Cause of shutdown and corresponding OSD Indication >

Cause of shutdown (MAIN)		Cause of shutdown (SUB)	
Main cause	**OSD Indication**	**Sub cause**	**OSD Indication**
SQ_LSI	SQ_LSI	Communication Error	RTRY
		Drive Stop	SQNO
		Busy	BUSY
		Version mismatching (H/S)	VER-HS
		Version mismatching (H/M)	VER-HM
		Version mismatching (H/I)	VER-HI
MDU-DEVICE	MD-DEV	Digital EEPROM	EEPROM
		Backup EEPROM	BACKUP
		DAC IC	DAC
Abnormally in RST2 power supply	RST2	–	–
Abnormally in panel temperature	TMP-NG	High temperature of the panel	TMP-H
		Low temperature of the panel	TMP-L

[2-5] PANEL-1 ADJ (+)

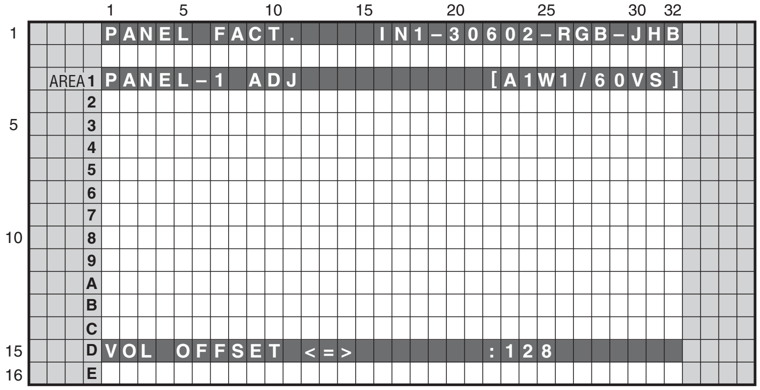
This is a page for settings for the driving voltage and AM radio countermeasures. Pressing the ENTER/SET key shifts the screen to the next nested layer below for item selection.
On third line of the screen, the white balance, ABL table, and drive sequence in the current status are displayed.
(Items that have lower layers are the same.)



```
PANEL FACT.     IN1-30602-RGB-JHB
AREA1                 [A1W1/60VS]
D PANEL-1 ADJ (+)
```

■ Key operation

<DOWN> : Shifting to PANEL-2 ADJ (+)
<UP> : Shifting to POWER DOWN
<SET> : Shifting to the next nested layer



```
PANEL FACT.     IN1-30602-RGB-JHB
AREA1 PANEL-1 ADJ     [A1W1/60VS]
D VOL OFFSET <=>      :128
```

■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment/setting value
<LEFT> : Subtracting by one from the adjustment/setting value
<VOL+> : Adding by 10 to the adjustment/setting value
<VOL-> : Subtracting by 10 from the adjustment/setting value
<SET> : Determining the adjustment/setting value and shifting to the upper layer

When entered to this layer, panel white balance and the gamma setting become the default temporarily for setting that is necessary for voltage adjustment. Turn off the noise option function.

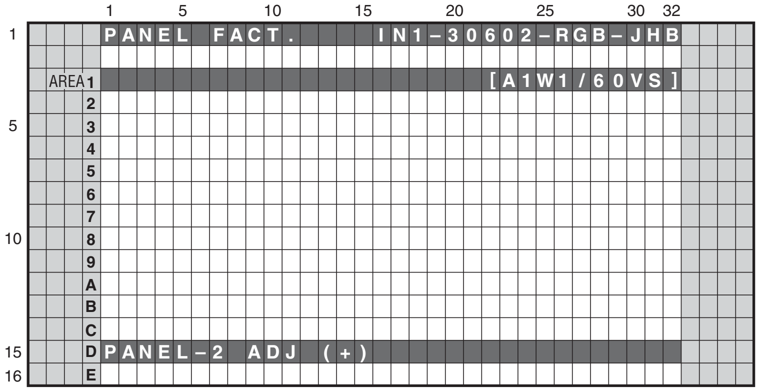
<Next nested layer of PANEL-1 ADJ (+)>

No.	Item	OSD Indication	Variable Range	Setting Value	RS-232C Command	Remarks
1	Vsus voltage	VOL SUS <=>	000 to 255	Factory adjustment value	VSU	
2	Vysnofs voltage	VOL OFFSET <=>			VOF	
3	Vyprst voltage	VOL RST P <=>			VRP	
4	Vxpofs1 voltage	VOL XPOFS1 <=>			VX1	
5	Vxpofs2 voltage	VOL XPOFS2 <=>			VX2	
6	Vyknofs1,2 voltage	VOL YKNOFS1 D <=>			V1F	
7	Vyknofs3 voltage	VOL YKNOFS3 D <=>			V3F	
8	Vyknofs4 voltage	VOL YKNOFS4 D<=>			V4F	
9	∆ Vyknofs1,2/3/4	VOL YKNOFSA D<=>			VYF	
10	First reset (wedge width)	RESET1ST_KSB <=>	112 to 144	128	R1K	Factory use item
11	Second reset (wedge width)	RESET2ND_KSB <=>			R2K	
12	1SF - Y sus tail (wedge width)	YSTL_1SF_KSB <=>			Y1K	
13	1SF - Y sus tail (resonance down width)	YSTL_1SF_HZ <=>			Y1Z	
14	3SF and later - first X sus (resonance up width)	XSUS_1ST_B <=>			X1B	
15	2SF - second Y sus (resonance up width)	YSUS_2ND_B <=>			Y2B	
16	2SF - third X sus (resonance up width)	XSUS_3RD_B <=>			X3B	
17	2SF - repeat Y sus (resonance up width)	YSUS_B <=>			YSB	
18	2SF - repeat X sus (resonance up width)	XSUS_B <=>			XSB	
19	3SF and later - Y sus tail (wedge width)	YSTL_KSB <=>			YTK	
20	3SF and later - Y sus tail (resonance down width)	YSTL_HZ <=>			YTZ	
21	2SF - Y sus tail (wedge width)	YSTL_2SF_KSB <=>			Y2K	
22	2SF - Y sus tail (resonance down width)	YSTL_2SF_HZ <=>			Y2Z	
23	3SF and later (2 pulses of SSF) - Y sus tail (wedge width)	YSTL_FMR_KSB <=>			YNK	
24	Timing between Scan and Address	SCAN ADRS ADJ <=>			SAT	
25	SUS frequency (AM radio anti-jamming)	SUS FREQ <=>	MODE1 to 8	MODE1	SFR	Note

Note: It is necessary to turn OFF and ON the power for reflecting the setting change.

[2-6] PANEL-2 ADJ (+)

- White balance of the panel can be adjusted. Pressing the ENTER/SET key shifts the screen to the next nested layer below for item selection.



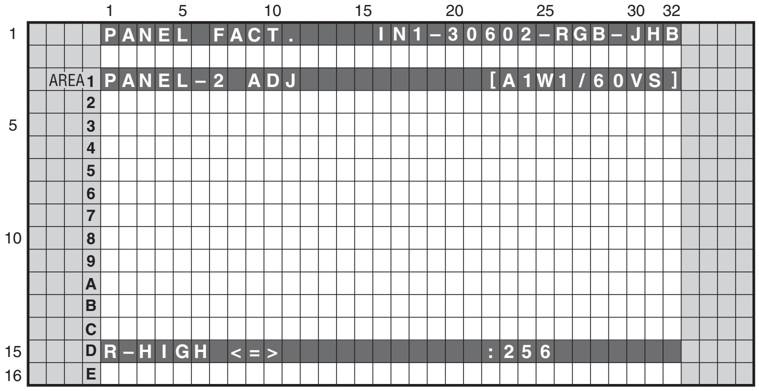
PANEL FACT. IN1–30602–RGB–JHB

AREA 1 [A1W1/60VS]

D PANEL–2 ADJ (+)

■ Key operation

<DOWN> : Shifting to PANEL FUNCTION (+)
<UP> : Shifting to PANEL-1 ADJ (+)
<SET> : Shifting to the next nested layer



PANEL FACT. IN1–30602–RGB–JHB

AREA 1 PANEL–2 ADJ [A1W1/60VS]

D R–HIGH <=> :256

■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment/setting value
<LEFT> : Subtracting by one from the adjustment/setting value
<VOL+> : Adding by 10 to the adjustment/setting value
<VOL-> : Subtracting by 10 from the adjustment/setting value
<SET> : Determining the adjustment/setting value and shifting to the upper layer

<Next nested layer of PANEL-2 ADJ (+)>

No.	Item	OSD Indication	Variable Range	Setting Value	RS-232C COMMAND	Remarks
1	Panel WB R highlight	R-HIGH <=>	000 to 999	Factory adjustment value	PRH	
2	Panel WB G highlight	G-HIGH <=>			PGH	
3	Panel WB B highlight	B-HIGH <=>			PBH	
4	Panel WB R lowlight	R-LOW <=>	000 to 999		PRL	
5	Panel WB G lowlight	G-LOW <=>			PGL	
6	Panel WB B lowlight	B-LOW <=>			PBL	
7	ABL	ABL <=>	000 to 255		ABL	

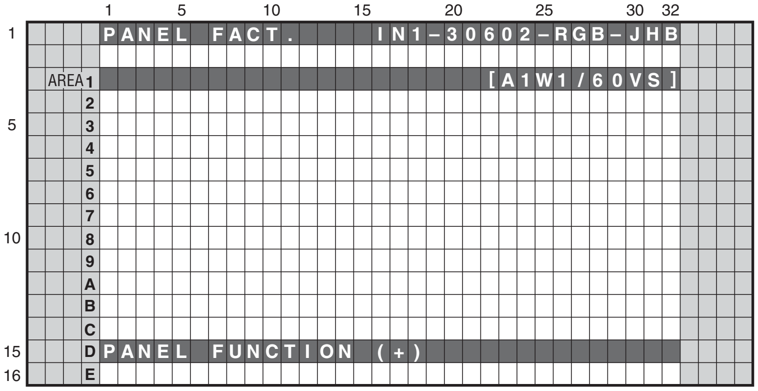
The ABL/WB adjustment values are grouped into three tables with ABL and four tables with WB, depending on the drive sequences. The adjustment value for the actually driven table is displayed. The number of the adjustment table and the drive sequence currently selected are displayed on the right side of the third line as the On-Screen display.

<ABL/WB adjustment table and Drive sequence>

ABL Table	WB Table	OSD Indication	Drive Sequence	OSD Indication	Remarks
TABLE 1	TABLE 1	A1W1	VIDEO-60Hz	60VS	
			PC-60Hz	60PS	
TABLE 2	TABLE 2	A2W2	VIDEO-48Hz	48VS	
			VIDEO-50Hz	50VS	
TABLE 3	TABLE 3	A3W3	VIDEO-72Hz	72VS	
			VIDEO-75Hz-1	75V1	
	TABLE 4	A3W4	VIDEO-75Hz-2	75V2	Correspond to MASK indication only

[2-7] PANEL FUNCTION (+)

- A level setting for panel degradation correction can be made. Pressing the ENTER/SET key shifts the screen to the next nested layer below for item selection.



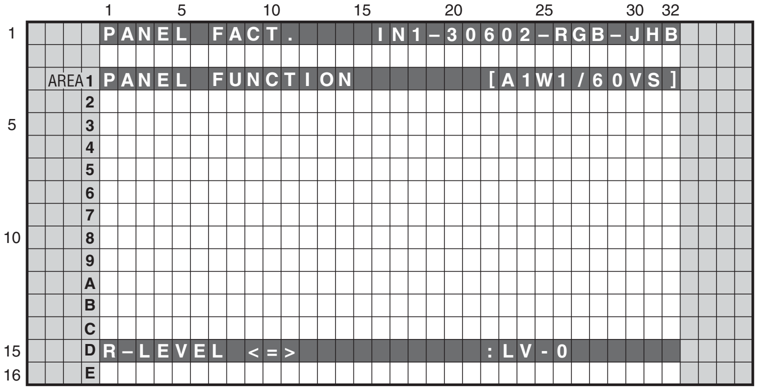
PANEL FACT. IN1-30602-RGB-JHB

[A1W1/60VS]

PANEL FUNCTION (+)

■ Key operation

<DOWN> : Shifting to ETC.(+)
<UP> : Shifting to PANEL-2 ADJ (+)
<SET> : Shifting to the next nested layer



PANEL FACT. IN1-30602-RGB-JHB

PANEL FUNCTION [A1W1/60VS]

R-LEVEL <=> :LV-0

■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment/setting value
<LEFT> : Subtracting by one from the adjustment/setting value
<SET> : Determining the adjustment/setting value and shifting to the upper layer

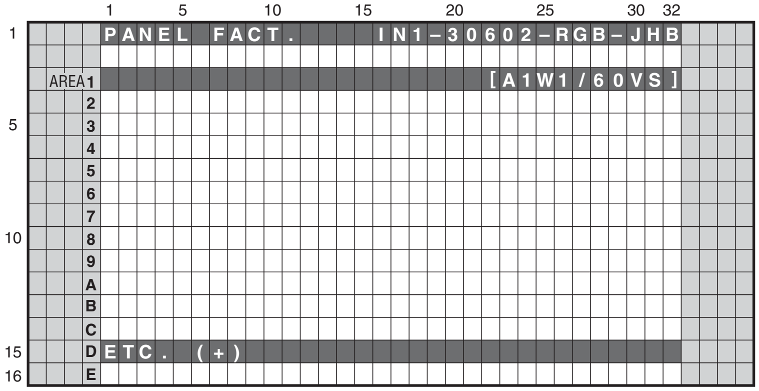
<Next nested layer of PANEL FUNCTION (+)>

No.	Item	OSD Indication	Variable Range	Setting Value	RS-232C COMMAND	Remarks
1	R deterioration correction LEVEL	R-LEVEL <=>	Lv-10 to 7	Lv-3	RRL	Factory use item (Note)
2	G deterioration correction LEVEL	G-LEVEL <=>		Lv-2	RGL	
3	B deterioration correction LEVEL	B-LEVEL <=>		Lv-0	RBL	
4	L1 address	ADDRESS L1 <=>	PH0 to 9	PH1	AP0	
5	L2 address	ADDRESS L2 <=>		PH3	AP0	
6	L3 address	ADDRESS L3 <=>		PH1	AP1	
7	L4 address	ADDRESS L4 <=>		PH3	AP1	
8	U1 address	ADDRESS U1 <=>		PH1	AP2	
9	U2 address	ADDRESS U2 <=>		PH3	AP2	
10	U3 address	ADDRESS U3 <=>		PH1	AP3	
11	U4 address	ADDRESS U4 <=>		PH3	AP3	
12	Streaking correction	STK MODE <=>	OFF to MODE1 to 8	MODE1	SKM	
13	Black display mode	FULL BLACK <=>	OFF to MODE1	MODE1	FBM	
14	Panel Rx characteristic	PANEL RX <=>	000 to 999	Factory adjustment value	PRX	Factory use item
15	Panel Ry characteristic	PANEL RY <=>	000 to 999		PRY	
16	Panel Gx characteristic	PANEL GX <=>	000 to 999		PGX	
17	Panel Gy characteristic	PANEL GY <=>	000 to 999		PGY	
18	Panel Bx characteristic	PANEL BX <=>	000 to 999		PBX	
19	Panel By characteristic	PANEL BY <=>	000 to 999		PBY	
20	Color sensor R coefficient	CLS R <=>	000 to 255	128	CSR	
21	Color sensor G coefficient	CLS G <=>	000 to 255	128	CSG	
22	Color sensor B coefficient	CLS B <=>	000 to 255	128	CSB	

Note: It is necessary to turn OFF and ON the power for reflecting the setting change.

[2-8] ETC. (+)

- Clearance of various log data for the panel and changing of settings for which setting data were not stored upon last update can be performed.
  Pressing the ENTER/SET key shifts the screen to the next nested layer below for item selection.



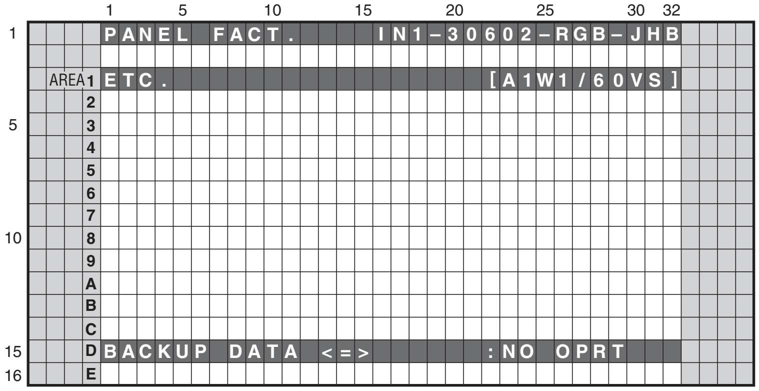
PANEL FACT. IN1–30602–RGB–JHB

[A1W1/60VS]

ETC. (+)

■ Key operation

<DOWN> : Shifting to RASTER MASK SETUP (+)
<UP> : Shifting to PANEL FUNCTION (+)
<SET> : Shifting to the next nested layer



PANEL FACT. IN1–30602–RGB–JHB

ETC. [A1W1/60VS]

BACKUP DATA <=> :NO OPRT

■ Key operation

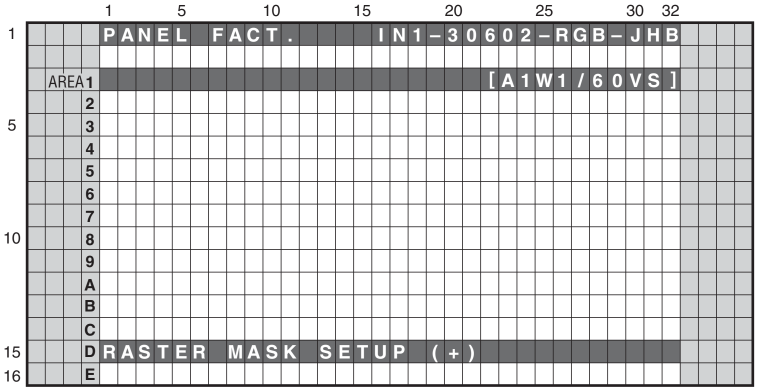
<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment/setting value
<LEFT> : Subtracting by one from the adjustment/setting value
<SET> : Determining the adjustment/setting value and shifting to the upper layer

<Next nested layer of ETC (+)>

No.	Item	OSD Indication	Processing Contents	RS-232C COMMAND	Remarks
1	Backup EEPROM data	BACKUP DATA <=>	• NO OPRT (No operation) • TRANSFER (Backup data transmission)	BCP	
2	Digital EEPROM data	DIGITAL EEPROM <=>	• NO OPRT (No operation) • REPAIR (Adjustment is complete) • DELETE (Adjustment is not complete)	FAJ/UAJ	
3	PD history	PD INFO. <=>	• NO OPRT (No operation) • CLEAR (Data clear)	CPD	
4	SD history	SD INFO. <=>		CSD	
5	HOUR METER	HR-MTR INFO. <=>		CHM	
6	Pulse meter	PM/B1-B5 <=>		CPM	
7	PON counter	P COUNT INFO. <=>		CPC	
8	Maximum temperature	MAX TEMP. <=>		CMT	
9	Mirror reversing display	MIRROR <=>	• Mirror reversing display OFF • MODE1 (Right and left reversing) • MODE2 (Top and bottom reversing) • MODE3 (Right and left, Top and bottom reversing)	MIR	The indication on the menu is also highlighted. The setting is canceled upon power-off.
10	Color sensor mode	CLS <=>	• Color sensor operation OFF • Color sensor operation ON	CSF	

[2-9] RASTER MASK SETUP (+)

- This menu set the RASTER MASK and the drive sequence at RASTER MASK state. Pressing the ENTER/SET key shifts the screen to the next nested layer below for item selection.



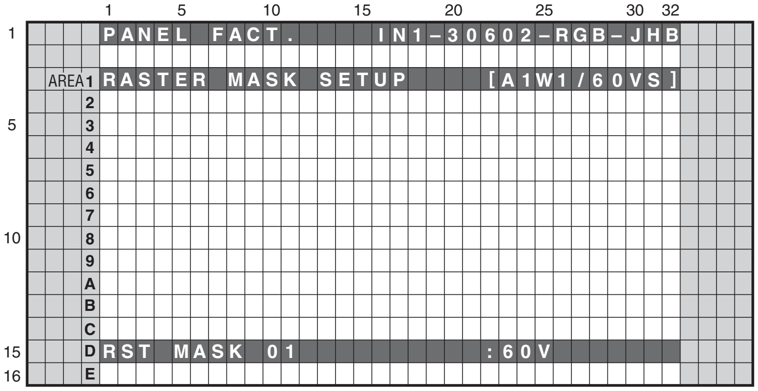
PANEL FACT. IN1–30602–RGB–JHB

[A1W1/60VS]

RASTER MASK SETUP (+)

■ Key operation

<DOWN> : Shifting to PATTERN MASK SETUP (+)
<UP> : Shifting to ETC. (+)
<SET> : Shifting to the next nested layer



PANEL FACT. IN1–30602–RGB–JHB

RASTER MASK SETUP [A1W1/60VS]

RST MASK 01 :60V

■ Key operation

<DOWN> : Shifting to the next MASK
<UP> : Shifting to the previous MASK
<RIGHT> : Changing MASK sequence (+)
<LEFT> : Changing MASK sequence (-)
<SET> : Determining the adjustment/setting value and shifting to the upper layer

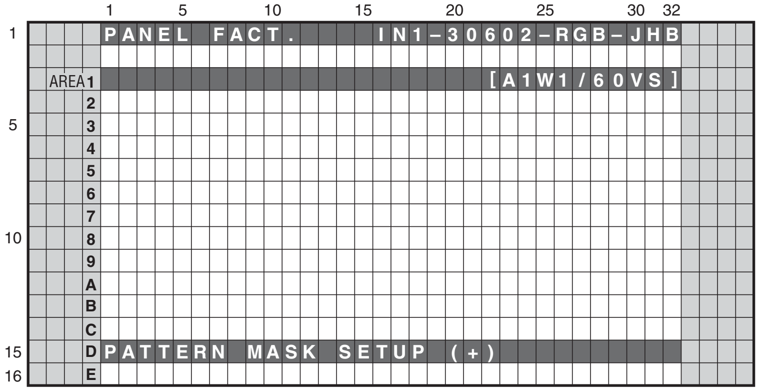
- The changed sequence and the ABL/WB table are retained until the mask is turned off.

<Next nested layer of RASTER MASK SETUP (+)>

No.	Item	OSD Indication	MASK Display Sequence	RS-232C COMMAND	Remarks
1	Mask off	MASK OFF		MKR/VFQ	
2	Display raster mask 01	RST MASK 01 <=>	<=>50V<=>60V<=>60P<=> 72V<=>75V1<=>75V2<=>		
...		...			
26	Display raster mask 25	RST MASK 25 <=>			

[2-10] PATTERN MASK SETUP (+)

- This menu set the PATTERN MASK and the drive sequence at PATTERN MASK state. Pressing the ENTER/SET key shifts the screen to the next nested layer below for item selection.



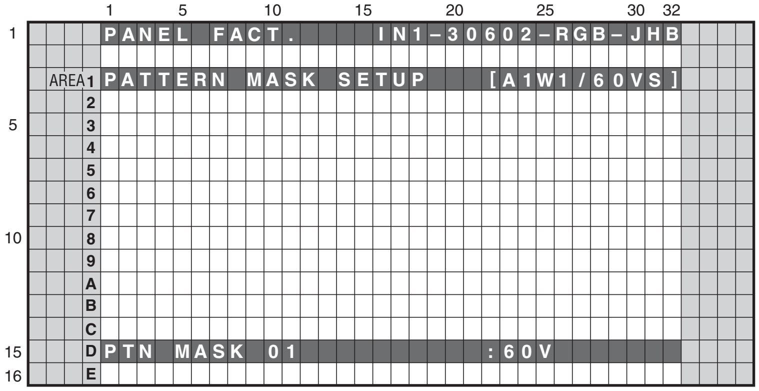
PANEL FACT. IN1-30602-RGB-JHB

[A1W1/60VS]

PATTERN MASK SETUP (+)

■ Key operation

<DOWN> : Shifting to COMBI MASK SETUP (+)
<UP> : Shifting to RASTER MASK SETUP (+)
<SET> : Shifting to the next nested layer



PANEL FACT. IN1-30602-RGB-JHB

PATTERN MASK SETUP [A1W1/60VS]

PTN MASK 01 :60V

■ Key operation

<DOWN> : Shifting to the next MASK
<UP> : Shifting to the previous MASK
<RIGHT> : Changing MASK sequence (+)
<LEFT> : Changing MASK sequence (-)
<SET> : Determining the adjustment/setting value and shifting to the upper layer

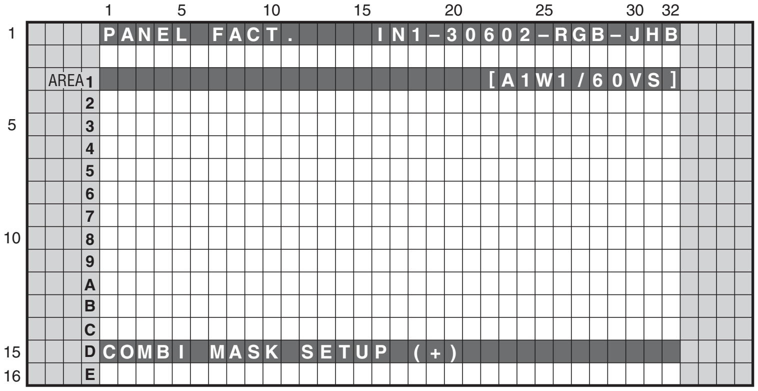
- The changed sequence and the ABL/WB table are retained until the mask is turned off.

<Next nested layer of PATTERN MASK SETUP (+)>

No.	Item	OSD Indication	MASK Display Sequence	RS-232C COMMAND	Remarks
1	Mask off	MASK OFF		MKS/VFQ	
2	Display raster mask 01	PTN MASK 01 <=>	<=>50V<=>60V<=>60P<=> 72V<=>75V1<=>75V2<=>		
...		...			
50	Display raster mask 49	PTN MASK 49 <=>			

[2-11] COMBI MASK SETUP (+)

- This menu set the COMBI MASK and the drive sequence at COMBI MASK state. Pressing the ENTER/SET key shifts the screen to the next nested layer below for item selection.



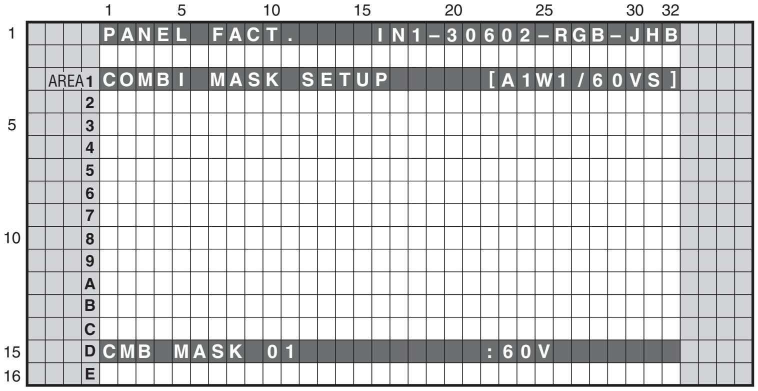
PANEL FACT. IN1−30602−RGB−JHB

[A1W1/60VS]

COMBI MASK SETUP (+)

■ Key operation

<DOWN> : Shifting to PANEL INFORMATION
<UP> : Shifting to PATTERN MASK SETUP (+)
<SET> : Shifting to the next nested layer



PANEL FACT. IN1−30602−RGB−JHB

COMBI MASK SETUP [A1W1/60VS]

CMB MASK 01 :60V

■ Key operation

<DOWN> : Shifting to the next MASK
<UP> : Shifting to the previous MASK
<RIGHT> : Changing MASK sequence (+)
<LEFT> : Changing MASK sequence (-)
<SET> : Determining the adjustment/setting value and shifting to the upper layer

- The changed sequence and the ABL/WB table are retained until the mask is turned off.

<Next nested layer of COMBI MASK SETUP (+)>

No.	Item	OSD Indication	MASK Display Sequence	RS-232C COMMAND	Remarks
1	Mask off	MASK OFF		MKC/VFQ	
2	Display raster mask 01	CMB MASK 01 <=>	<=>50V<=>60V<=>60P<=> 72V<=>75V1<=>75V2<=>		
...		...			
18	Display raster mask 17	CMB MASK 17 <=>			

[3] OPTION

Operation item

No.	Function	Content	RS-232C
[3-1]	CH PRESET <=>	Set the channel map for production line	SCP
[3-2]	Digital AFT <=>	Set AFT of the Satellite digital broadcasting (*1)	AFT
[3-3]	SYNC DET (+)	Set the synchronized signal detection of VDEC	–––
[3-4]	CTI (+)	Set the synchronized signal detection of VDEC	–––

(*1): PDP-LX5090H only

[3-1] CH PRESET <=>

Exclusively used for production line.

[3-2] Digital AFT <=>

Exclusively used for production line.

[3-3] SYNC DET (+)

Exclusively used for technical analysis (details omitted).

[3-4] CTI (+)

Exclusively used for technical analysis (details omitted).

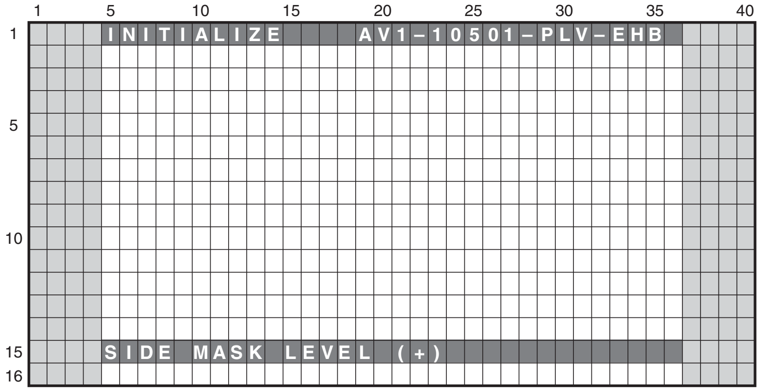
[4] INITIALIZE

Operation item

No.	Function	Content	RS-232C
[4-1]	SIDE MASK LEVEL (+)	Configure the color of the side mask.	SML
[4-2]	FINAL SETUP (+)	Initialize flash memorys on virgin product status	FST
[4-3]	DTB SERVICE MODE (+)	Enter the Digital Tuner Service Menu (*1)	–––
[4-4]	Wide XGA AUTO <=>	Exclusively used for technical analsyis.	–––
[4-5]	AUTO ADJUSTMENT (+)	Perform the auto-adjustment setting process	–––

(*1): PDP-LX5090H only

[4-1] SIDE MASK LEVEL (+)



INITIALIZE AV1–10501–PLV–EHB

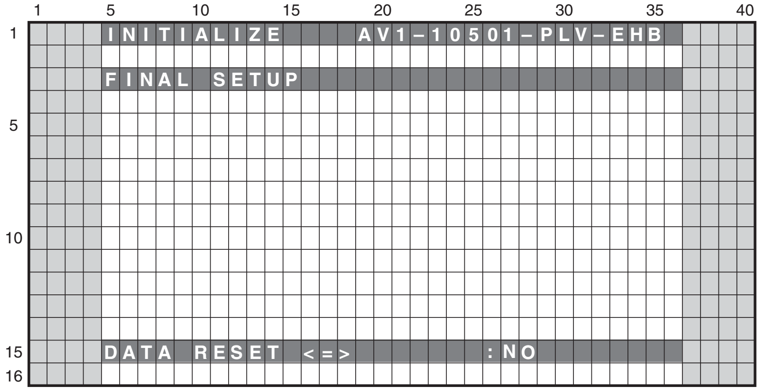
SIDE MASK LEVEL (+)

To configure sidemask level (To adjust the values, input signal is required).

Display Item	Content	RS-232C
SIDE MASK LEVEL <=>	Adjust Side Mask level (Adjustable range: 000 to 255, Initial value: 115)	SML

Note: In this mode (SIDE MASK LEVEL), adjustment value cannot changed with the VOLUME +/- keys.

[4-2] FINAL SETUP (+)



INITIALIZE AV1–10501–PLV–EHB

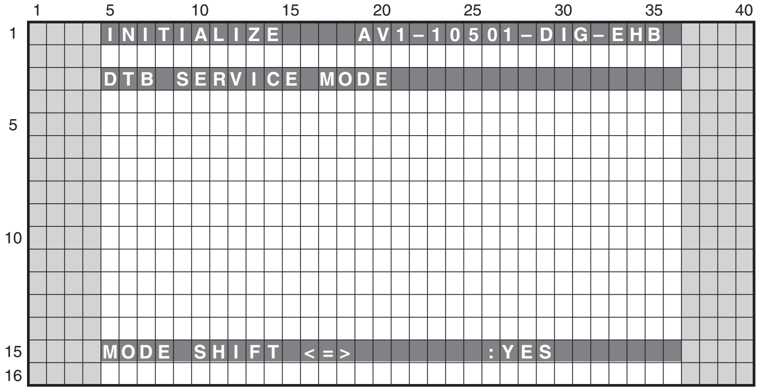
FINAL SETUP

DATA RESET <=> :NO

- To reset each memory values to factory default values. Factory command is "FST".
- When the configuration is set to <NO> and the [ENTER/SET] key is pressed, no action is taken and the menu returns to previous screen.
- When the configuration is set to <YES> and the [ENTER/SET] key is pressed for 5 seconds, the reset action executes.

Be sure to disconnect and connect the AC cable after FINAL SETUP.
When replacing the MAIN Assy, the FINAL SETUP is required.

[4-3] DTB SERVICE MENU (+)



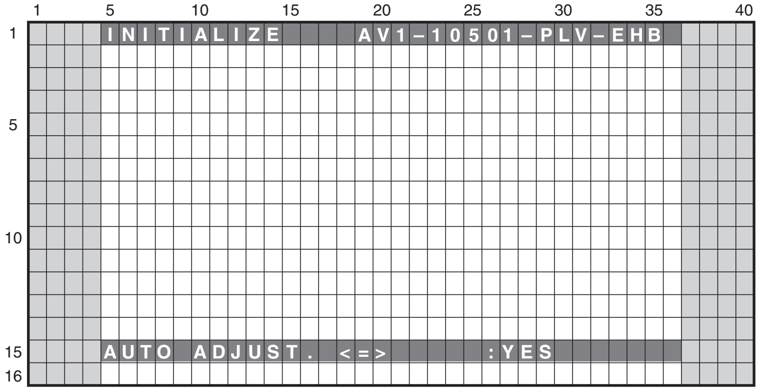
```
INITIALIZE     AV1–10501–DIG–EHB

DTB SERVICE MODE

MODE SHIFT <=>         :YES
```

If the [ENTER/SET] key is kept on pressing for 5 second when the status of this menu is <YES>, shift to the DTB SERVICE mode screen. (Release from the SERVICE FACTORY mode.)

[4-4] WIDE XGA AUTO <=>

Exclusively used for technical analysis (details omitted).

[4-5] AUTO ADJUSTMENT (+)



```
INITIALIZE     AV1–10501–PLV–EHB

AUTO ADJUST. <=>       :YES
```

- When the configuration is set to <NO> and the [ENTER/SET] key is pressed, no action is taken and the menu returns to previous screen.
- When the configuration is set to <YES> and the [ENTER/SET] key is pressed for 5 seconds, the auto-adjustment action executes.

- **Be sure to power off with the remote control unit or disconnect and connect the AC cable after the auto-adjustment is completed.**
- **When replacing the IO Assy or MAIN Assy, the auto-adjustment is required.**
- **When this unit is used with the HD AV Converter, the interlocking setting with the HD AV Converter is released. Reset it after the auto adjustment is completed.**

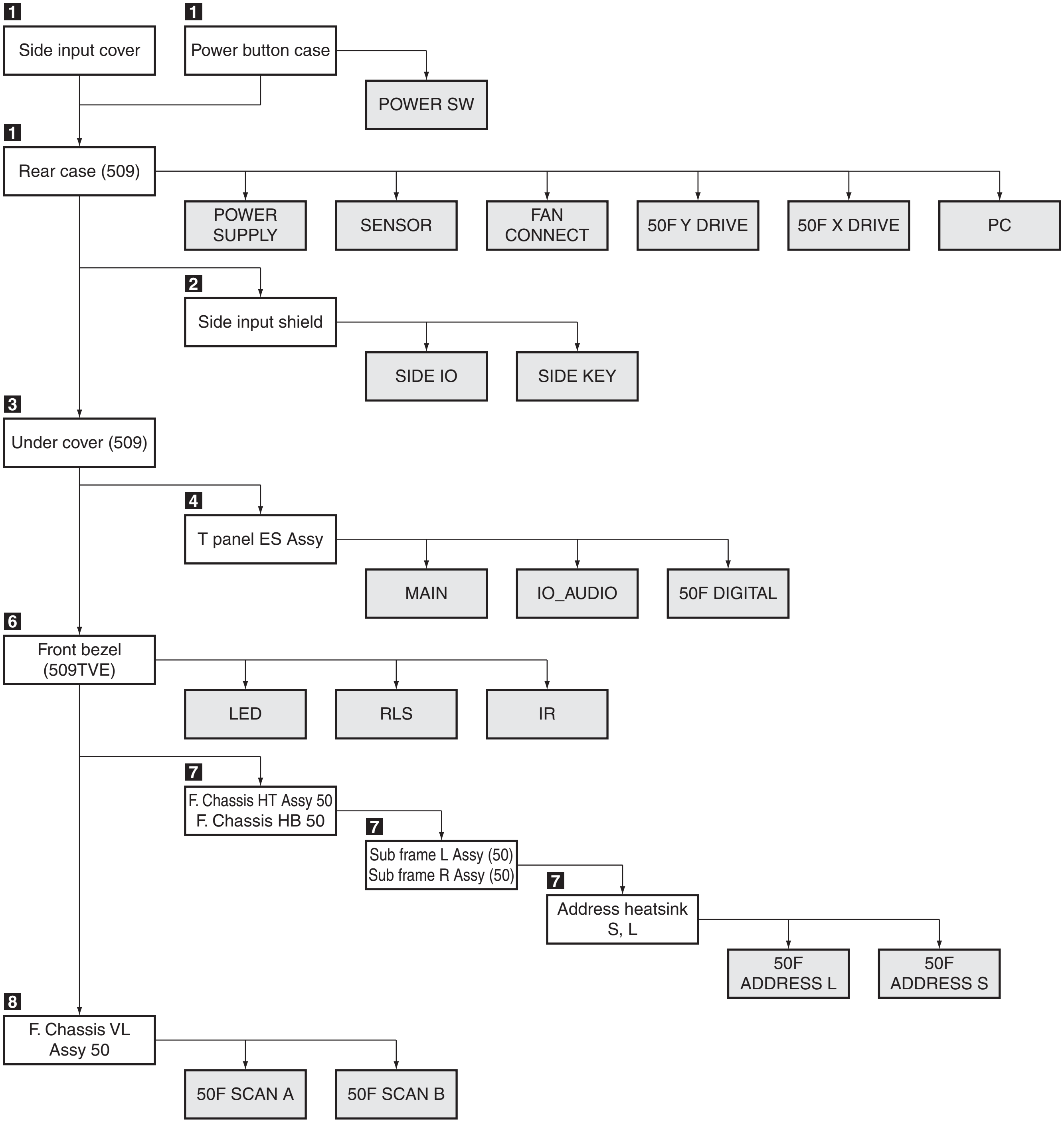
7. DISASSEMBLY

7.1 FLOWCHART OF REMOVAL ORDER

Note: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Flowchart of removal order for the main parts and boards

It is efficient to proceed with removal of the main parts and boards in the order shown in the chart below:


1 Side input cover
1 Power button case
POWER SW
1 Rear case (509)
POWER SUPPLY
SENSOR
FAN CONNECT
50F Y DRIVE
50F X DRIVE
PC
2 Side input shield
SIDE IO
SIDE KEY
3 Under cover (509)
4 T panel ES Assy
MAIN
IO_AUDIO
50F DIGITAL
6 Front bezel (509TVE)
LED
RLS
IR
7 F. Chassis HT Assy 50
F. Chassis HB 50
7 Sub frame L Assy (50)
Sub frame R Assy (50)
7 Address heatsink S, L
50F ADDRESS L
50F ADDRESS S
8 F. Chassis VL Assy 50
50F SCAN A
50F SCAN B

7.2 DISASSEMBLY

Disassembly

1 Rear Case (509)

● Power button case

① Remove the two screws. (ABA1379)

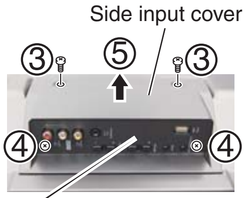
② Remove the power button case.

● Side input cover

③ Remove the two screws. (ABA1378)

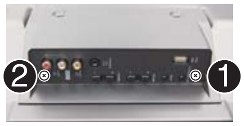
④ Remove the two screws. (ABA1377)

⑤ Remove the side input cover.



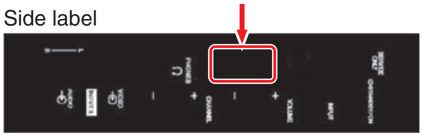
• Screw tightening order

The other screws are random order.

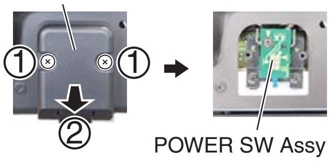


A cutout for an HDMI connector is provided on the side input cover, and the side label is attached over the cutout. Be careful not to accidentally push on the area of the label indicated in the figure below, because that area will become indented.

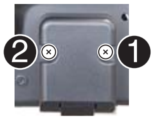
Side label



Power button case



• Screw tightening order



● Rear case (509)

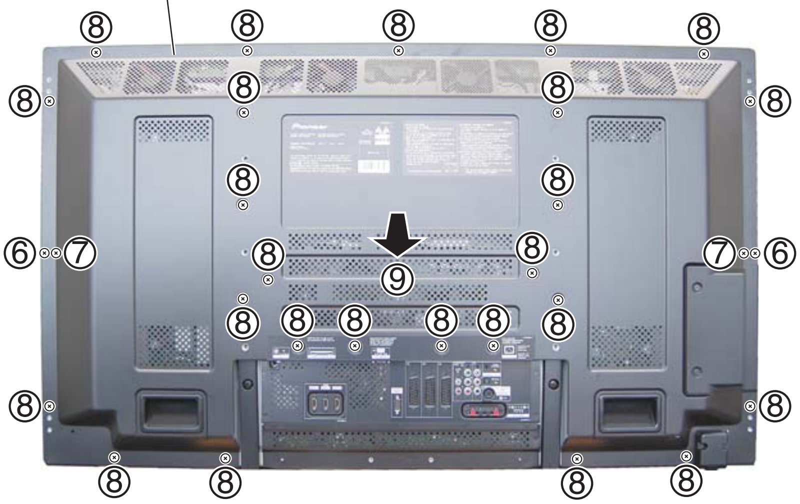
⑥ Remove the two screws. (ABA1380)

⑦ Remove the two screws. (ABA1379)

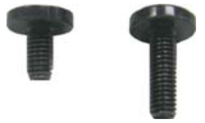
⑧ Remove the 25 screws. (ABA1377)

⑨ Remove the rear case (509).

Rear case (509)

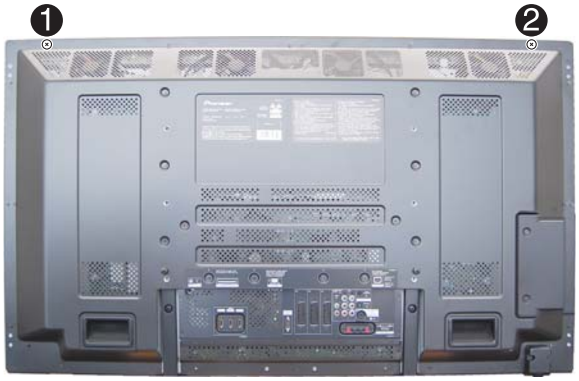


Reference



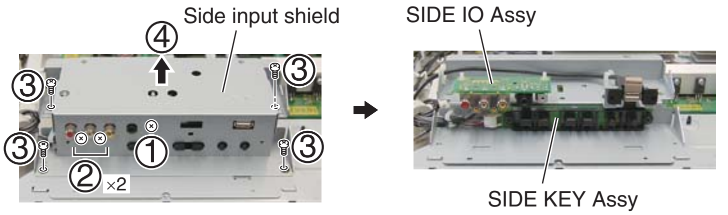
■ Screw tightening order

The other screws are random order.

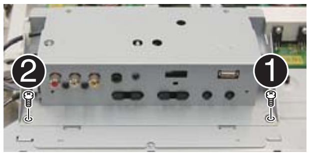


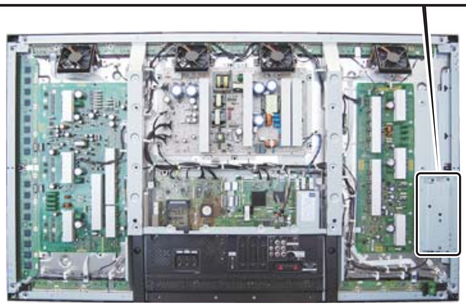
2 Side Input Shield

① Remove the one screw. (BMZ30P080FTB)
② Remove the two screws. (BPZ30P080FTB)
③ Remove the four screws. (AMZ30P060FTB)
④ Remove the side input shield.


Side input shield
SIDE IO Assy
④
③
③
③
③
①
② ×2
SIDE KEY Assy

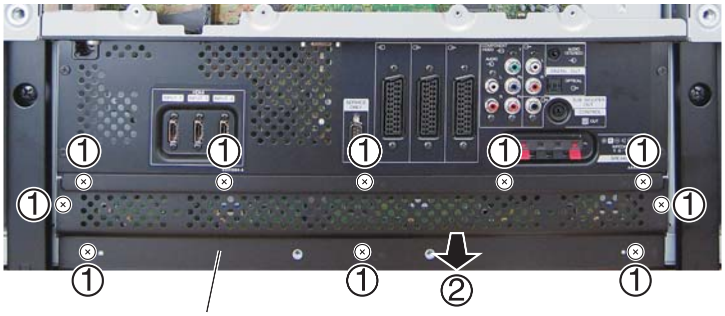
• Screw tightening order
The other screws are random order.





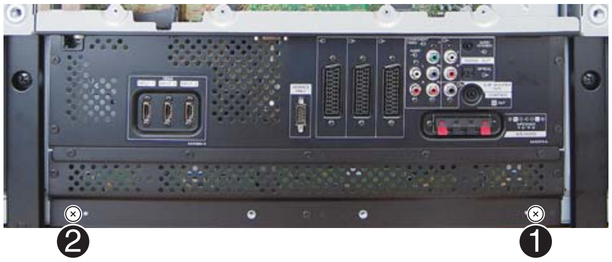
3 Under Cover (509)

① Remove the 10 screws. (ABA1377)
② Remove the under cover (509).


①
①
①
①
①
①
①
①
①
①
②
Under cover (509)

■ Screw tightening order

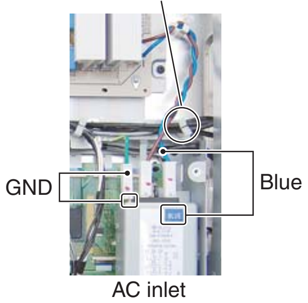
The other screws are random order.

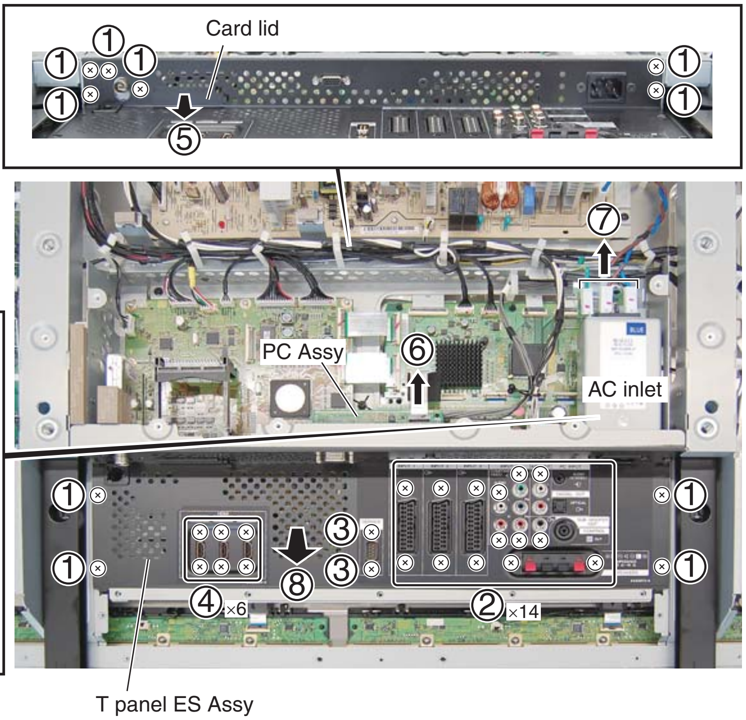


4 T Panel ES Assy

① Remove the 10 screws. (ABA1377)
② Remove the 14 screws. (BPZ30P080FTB)
③ Remove the two hexagon head screws. (ABA1382)
④ Remove the six screws. (BMZ30P060FTB)
⑤ Remove the card lid.
⑥ Disconnect the one flexible cable.
⑦ Disconnect the three connectors.
⑧ Remove the T panel ES Assy.

Do NOT pass the AC inlet jumper wire through this wire saddle.

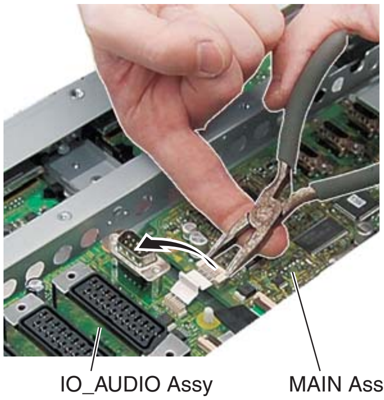

GND
Blue
AC inlet

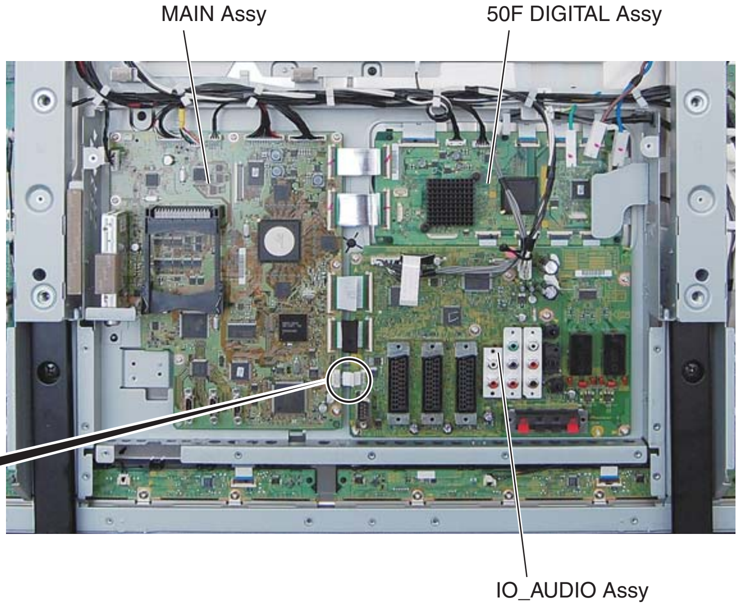

Card lid
①
①
①
①
①
①
⑤
⑦
PC Assy
⑥
AC inlet
①
①
③
③
⑧
④×6
②×14
①
①
T panel ES Assy

Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype. Upon servicing, be sure to restore the original wiring of the unit after repair work.

How to remove the bridge connector

(1) Grip the two short edges of the connector with longnose pliers.
(2) Insert a finger between the longnose pliers and the board to protect the board and the mounted parts on the board from accidental damage by the pliers then, using your finger as a fulcrum and the pliers as a lever, pry the connector upward to remove it.

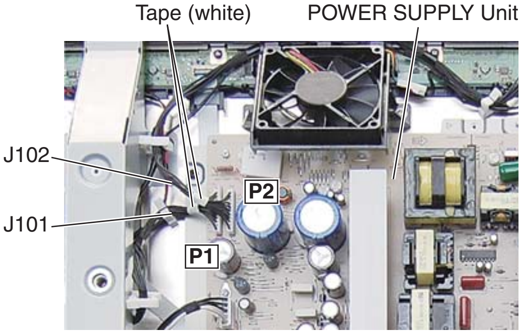

IO_AUDIO Assy
MAIN Assy


MAIN Assy
50F DIGITAL Assy
IO_AUDIO Assy

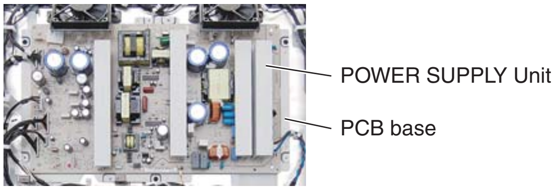
Notes on Lead Dressing

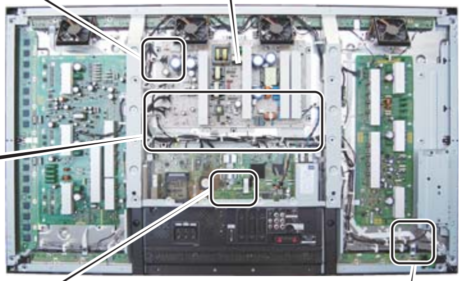
Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype.
Upon servicing, be sure to restore the original wiring of the unit after repair work.

The J101 and J102 cables require correct orientation for connection. Connect the connectors with white tape to the POWER SUPPLY Unit.

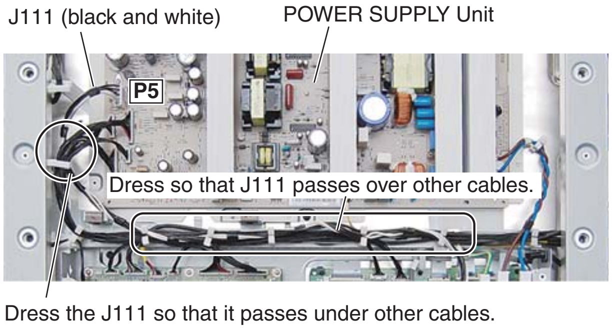

Tape (white)
POWER SUPPLY Unit
J102
J101
P2
P1

When removing the POWER SUPPLY Unit, be sure to remove not only the POWER SUPPLY Unit but entire PCB base.

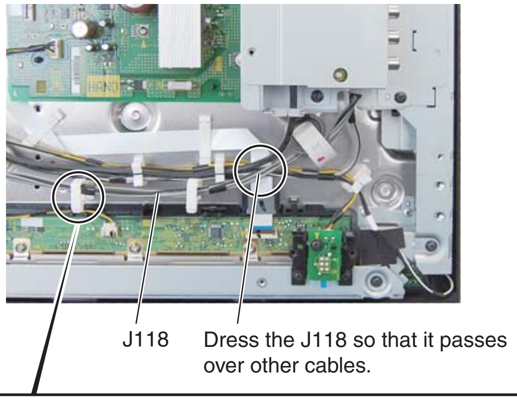

POWER SUPPLY Unit
PCB base



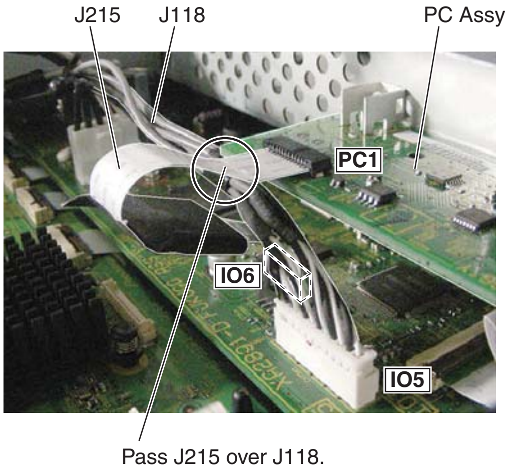
Around the periphery of the Multibase, the J111 cable wires (black and white) must be bound lastly then be dressed so that they pass over other cables.


J111 (black and white)
POWER SUPPLY Unit
P5
Dress so that J111 passes over other cables.
Dress the J111 so that it passes under other cables.

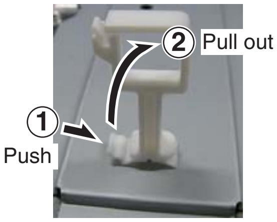
Dress the J118 cable so that it passes over other cables.


J118
Dress the J118 so that it passes over other cables.

The J215 cable must be passed over the J118 cable.


J215
J118
PC Assy
PC1
IO6
IO5
Pass J215 over J118.

How to remove the newly adopted wire saddle from the chassis


② Pull out
① Push

5 Access to 50F DIGITAL Assy

Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype. Upon servicing, be sure to restore the original wiring of the unit after repair work.

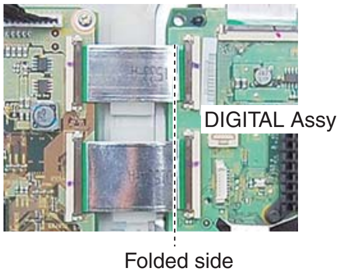
Note:
When you remove whole Multibase Section, it is not necessary to remove T panel ES Assy.

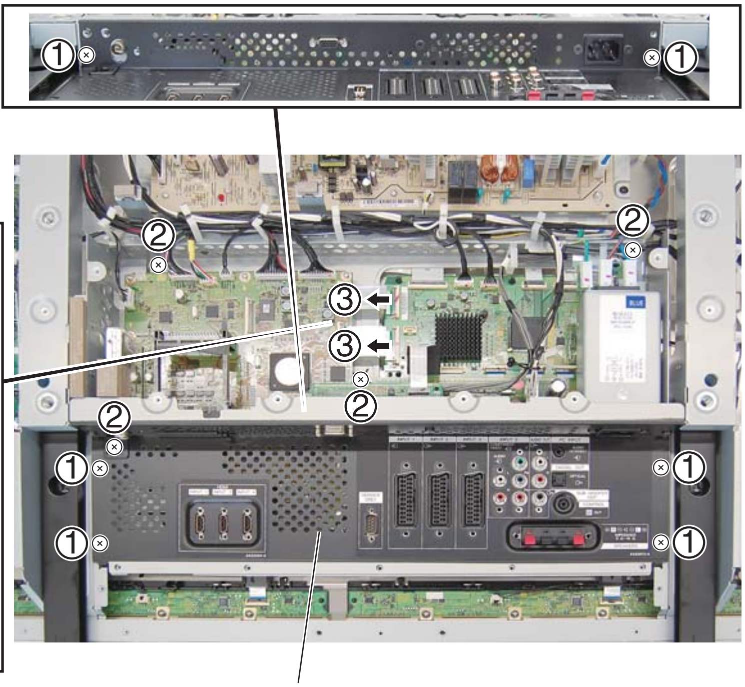
① Remove the six screws. (ABA1377)

② Remove the four screws. (ABA1351)

③ Disconnect the two flexible cables.

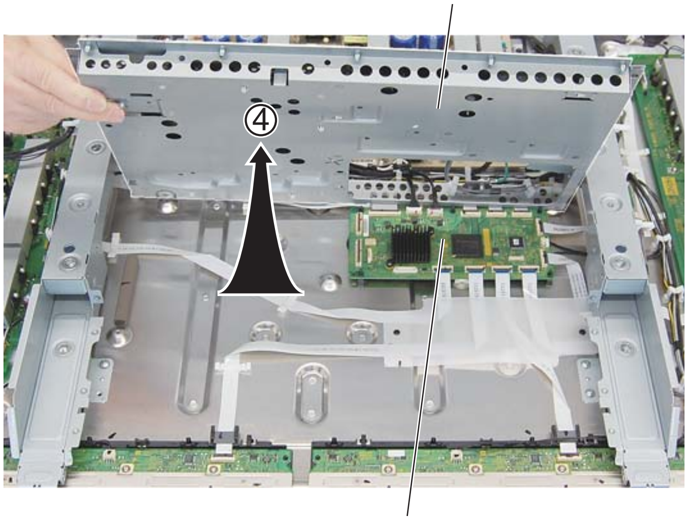
Note on connection of the flexible cable
This flexible cables requires correct orientation for connection. Connect the folded side of the cable to the connector on the DIGITAL Assy, as shown in the photo below. **Reversely connecting the cable will damage the Assy.**





T panel ESAssy

④ Lift the Multibase Section to the direction of the arrow.

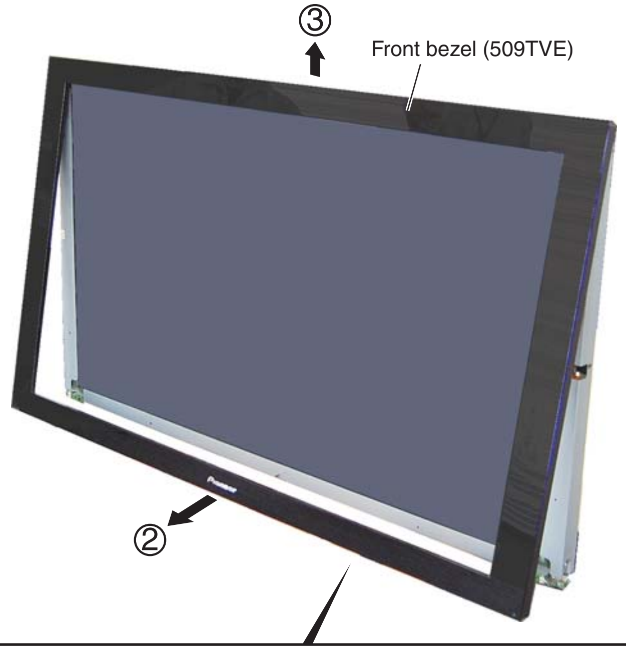


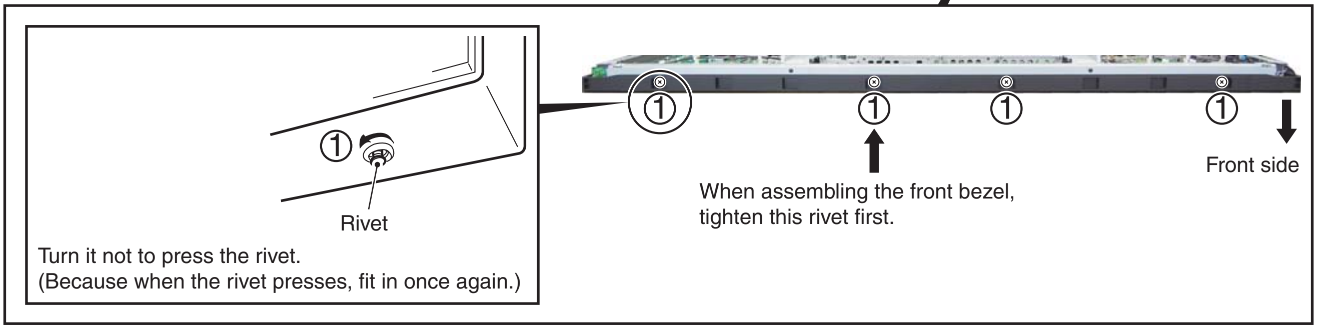
6 Front Bezel (509TVE)

① Remove the four rivets.

② Pull the lower part of the front bezel (509TVE) toward you and out.

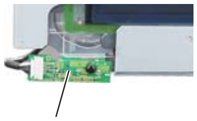
③ Remove the front bezel (509TVE), by pulling it upward.

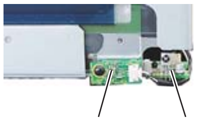

③
Front bezel (509TVE)
②


①
Rivet
①
①
①
①
Front side

Turn it not to press the rivet.
(Because when the rivet presses, fit in once again.)

When assembling the front bezel, tighten this rivet first.

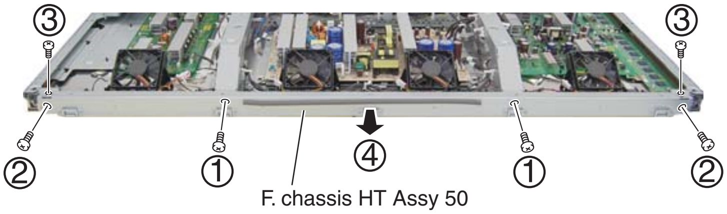



RLS Assy
IR Assy

7 Access to ADDRESS L and S Assys

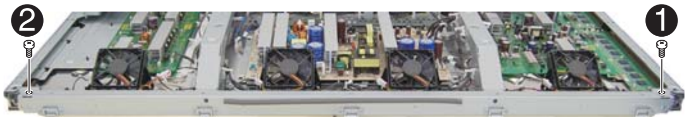
● F. Chassis HT Assy 50

① Remove the two screws. (AMZ30P060FTB)
② Remove the two screws. (ABZ30P080FTC)
③ Remove the two screws. (AMZ30P060FTB)
④ Remove the F. chassis HT Assy 50.



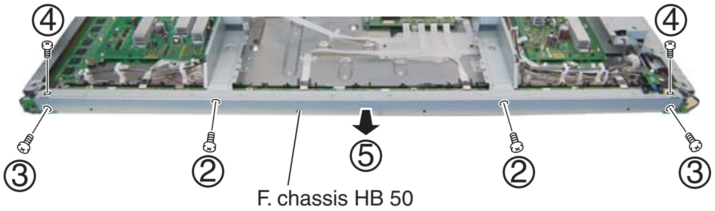
Screw tightening order

The other screws are random order.



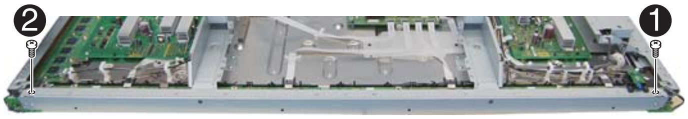
● F. Chassis HB 50

① Disconnect cables, connectors, as required.
② Remove the two screws. (AMZ30P060FTB)
③ Remove the two screws. (ABZ30P080FTC)
④ Remove the two screws. (AMZ30P060FTB)
⑤ Remove the F. chassis HB 50.



Screw tightening order

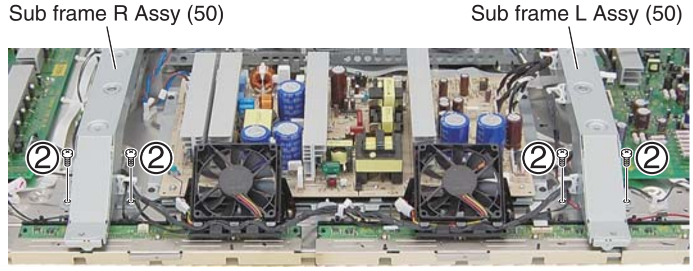
The other screws are random order.



● Sub frame L and R Assys

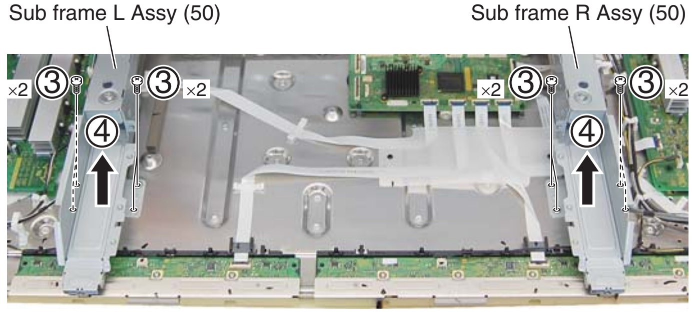
① Disconnect cables, connectors, as required.

② Remove the four screws. (TBZ40P060FTC)


Sub frame R Assy (50)
Sub frame L Assy (50)
②
②
②
②

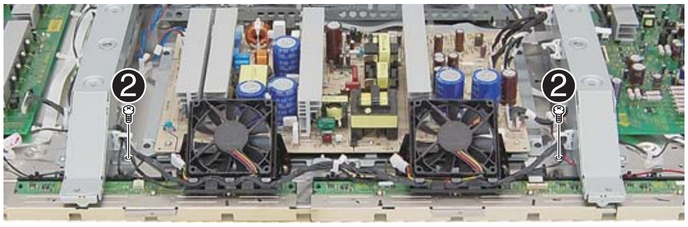
③ Remove the eight screws. (TBZ40P060FTC)

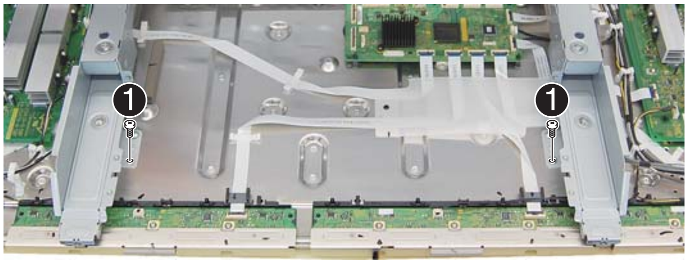
④ Remove the sub frame L and Assys.


Sub frame L Assy (50)
Sub frame R Assy (50)
×2 ③
③ ×2
×2 ③
③ ×2
④
④

■ Screw tightening order

The other screws are random order.

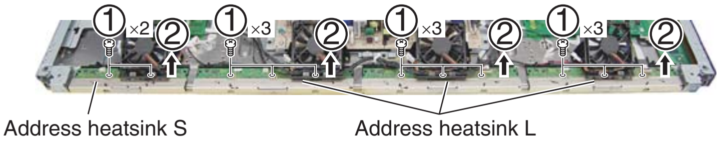


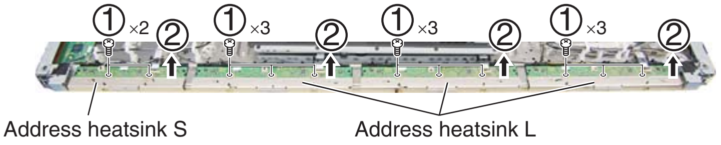


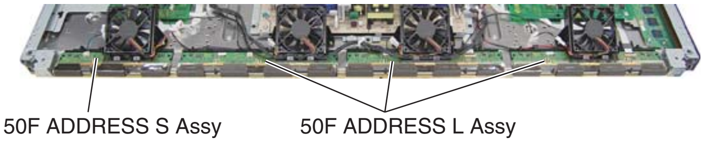
● Address heatsink S , L

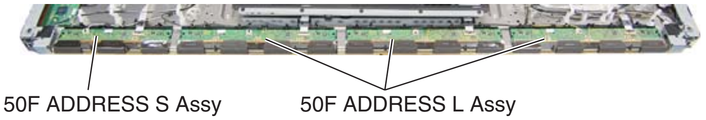
① Remove the 22 screws. (ABA1351)

② Remove the two address heatsinks S and six address heatsinks L.


① ×2
②
① ×3
②
① ×3
②
① ×3
②
Address heatsink S
Address heatsink L

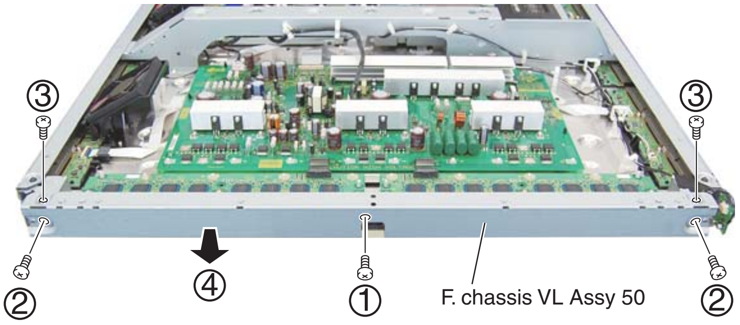

① ×2
②
① ×3
②
① ×3
②
① ×3
②
Address heatsink S
Address heatsink L


50F ADDRESS S Assy
50F ADDRESS L Assy


50F ADDRESS S Assy
50F ADDRESS L Assy

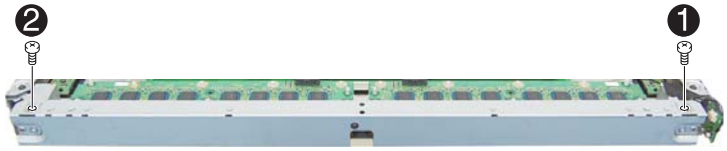
8 Access to SCAN A and B Assys

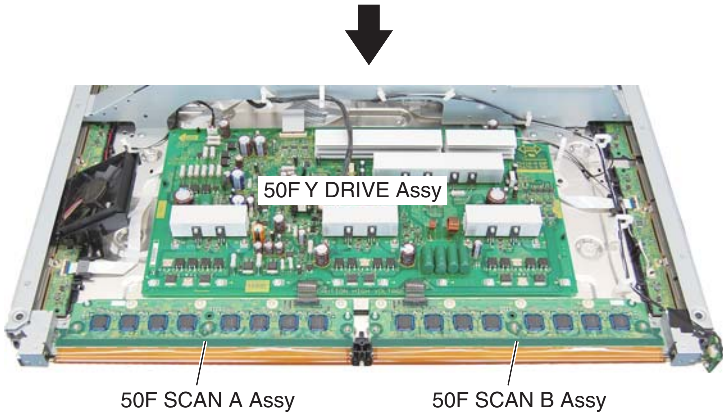
① Remove the one screw. (APZ30P080FTB)
② Remove the two screws. (ABZ30P080FTC)
③ Remove the two screws. (AMZ30P060FTB)
④ Remove the F. chassis VL Assy 50.


③
③
②
④
①
F. chassis VL Assy 50
②

■ Screw tightening order

The other screws are random order.




50F Y DRIVE Assy
50F SCAN A Assy
50F SCAN B Assy

8. EACH SETTING AND ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

8.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	Refer to “8.3 HOW TO CLEAR HISTORY DATA” .
DIGITAL Assy	➡	Writing of backup data is required. Refer to the “8.2 BACKUP OF THE EEPROM (DIGITAL ASSY)”.
X DRIVE Assy	➡	No adjustment required
Y DRIVE Assy	➡	No adjustment required
Service Panel Assy	➡	Refer to “8.3 HOW TO CLEAR HISTORY DATA” and “8.4 ADJUSTMENTS WHEN THE SERVICE PANEL ASSY IS REPLACED”.
MAIN Assy (*)	➡	Execute section [4-5] AUTO ADJUSTMENT of 6.2 [4] INITIALIZE.
IO AUDIO Assy	➡	Execute section [4-5] AUTO ADJUSTMENT of 6.2 [4] INITIALIZE.
PANEL SENSOR Assy	➡	No adjustment required Backup data are automatically copied during the next power-off.
Other assemblies	➡	No adjustment required

(*) : When replacing the MAIN Assy, be sure to perform the FINAL SETUP.

When any of the following assemblies is repaired

Notes on replacing parts
For the parts described in the list below, replacement is required for the whole Assy, not only the defective part.
If any part listed below is identified as defective and needs replacement, replace the whole Assy, and make necessary adjustments after replacement.

PCB Assy No.	Assy Name	Parts that Require Whole-Assy Replacement		
		Ref No.	Function Name	Part No.
AWV2555	MAIN Assy	IC5002	EEPROM	BR24L02FV-W
		IC5003	EEPROM	BR24L02FV-W
		IC5004	EEPROM	BR24L02FV-W
		IC7004	EEPROM	BR24L64F-W
		IC6701	Flash ROM	AGC1080
		IC6811	Flash UCOM	AGC1072
		IC7202	Flash ROM	AGC1075
		IC7205	Flash ROM	AGC1076
AWV2543	DIGITAL Assy	IC3302	Flash ROM	AGC1071
		IC3601	Flash UCOM	AGC1070
AWW1359	PC Assy	IC8802	EEPROM	BR24L01AFJ-W
AWW2546	X DRIVE Assy	• Parts of X D-D CON BLOCK		
AWW2547	Y DRIVE Assy	• Parts of Y VF D-D CON BLOCK 1 • Parts of Y MAIN D-D CON BLOCK 1 • Parts of Y MAIN D-D CON BLOCK 2		

Reason: The whole Assy must be replaced, because adjustments and data rewriting for the Assy at the level of production line are required.

For the parts described in the table below, replacement of individual parts is difficult, because a heat pad is provided under the bottom of the ICs.

PCB Assy No.	Assy Name	Parts that Require Whole-Assy Replacement		
		Ref No.	Function Name	Part No.
AWV2555	MAIN Assy	IC4501	DC/DC Converter	LTC3407EMSE-2
		IC4901	HDMI Rx	SII9125CTU
AWW1354	IO AUDIO Assy	IC8401	Digital Amp	TAS5122DCA

POWER SUPPLY Unit	The assembly must be replaced as a unit, and no part replacement is allowed.
MAIN Assy	No adjustment is required after replacement of parts other than those shown in “8.7 ADJUSTMENT WHEN THE MAIN OR IO_AUDIO ASSY IS REPLACED.
IO AUDIO Assy	No adjustment is required after replacement of parts other than those shown in “8.7 ADJUSTMENT WHEN THE MAIN OR IO_AUDIO ASSY IS REPLACED.
DIGITAL Assy	No adjustment required
X DRIVE Assy	No adjustment is required after replacement of parts other than those shown in “8.5 ADJUSTMENT WHEN THE DRIVE ASSYS ARE REPLACED.
Y DRIVE Assy	No adjustment is required after replacement of parts other than those shown in “8.5 ADJUSTMENT WHEN THE DRIVE ASSYS ARE REPLACED.
ADDRESS Assy	No adjustment required
PANEL SENSOR Assy	No adjustment required
Other assemblies	No adjustment required

8.2 BACKUP OF THE EEPROM (DIGITAL ASSY)

Outline

Adjustment data are stored in the EEPROM on the DIGITAL Assy in the production process. Those adjustment data are also automatically stored in the EEPROM (for backup) on the PANEL SENSOR Assy.
If the DIGITAL Assy is replaced, those adjustment data for backup can be copied from the EEPROM on the PANEL SENSOR Assy to a new DIGITAL Assy.

Backed up data

- Drive voltage adjustment value
- Panel white balance adjustment value
- Drive waveform adjustment value
- Hour-meter count
- Pulse-meter count
- P-ON counter value
- Serial No.
- PD/SD histories

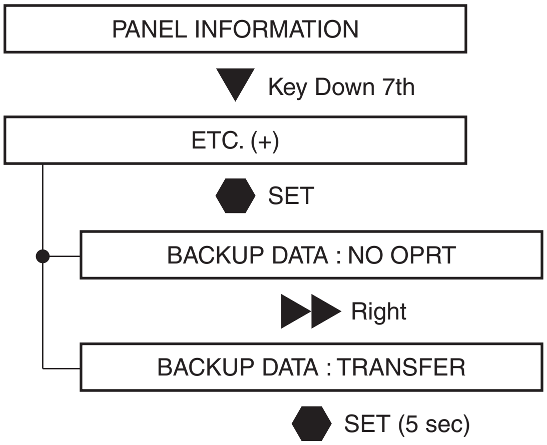
How to copy backup data

1. When the DIGITAL Assy is replaced with one for service (usual service)

Immediately after the DIGITAL Assy is replaced, the EEPROM on the DIGITAL Assy is in the status "adjustment not completed," and the EEPROM for backup on the PANEL SENSOR Assy is in the status "adjustment completed." The LED on the main unit warns you that the adjustment data in the EEPROM for backup have not been copied to the EEPROM on the DIGITAL Assy, by lighting the red LED and flashing the blue LED. In such a case, the adjustment data for backup can be used by copying the data to the EEPROM on the DIGITAL Assy, with the following procedures:

(1) Copying, using the Factory menu

① Turn on the power.
② Enter the Panel Factory mode.
③ Display the PANEL INFORMATION page, then check if "NO DATA!" is set for "DIG. EEP" and "ADJUSTED" is set for "BACKUP".
④ Copy the backup data, as shown in the figure below.



⑤ Check if "ADJUSTED" is set for "DIG. EEP" on the PANEL INFORMATION page.
⑥ Turn off the power.

(2) Copying, using the RS-232C commands

① Turn on the power.
② Issue the FAY command.
③ With the QS2 command, confirm that the main unit adjustment flag is "adjustment not completed" and that the adjustment backup flag is "adjustment completed."
④ Issue the BCP command to transfer the data stored in the EEPROM for backup.
⑤ With the QS2 command, confirm that the main unit adjustment flag becomes "adjustment completed."
⑥ Turn off the power.

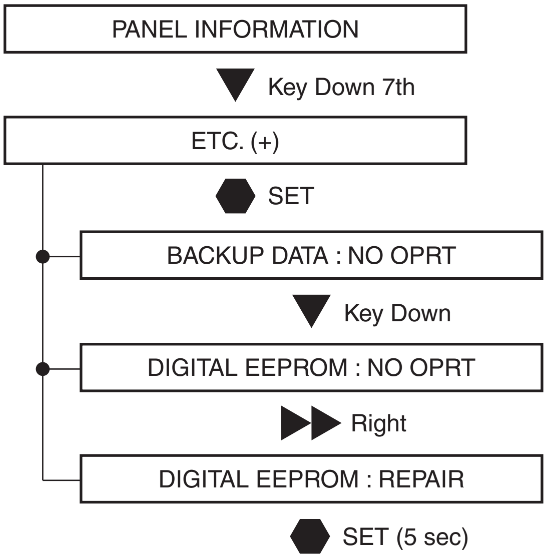
Note: If both the DIGITAL and PANEL SENSOR Assys are to be replaced, replace the PANEL SENSOR Assy first in order to store the backup data. Then turn the unit on then back off again, then replace the DIGITAL Assy.

2. When manual adjustment is required after the DIGITAL Assy is replaced with one for service

If backup data cannot be transferred to the DIGITAL Assy because of defective parts, etc., after the DIGITAL Assy is replaced and manual adjustment is performed, those manually adjusted data can be registered as adjusted data with the following procedures. Once the data on the DIGITAL Assy are registered as adjusted data, the adjustment data for backup will be automatically updated each time the unit is turned off. Therefore, if a DIGITAL Assy with adjusted data is mounted on the unit, the following procedures are not required, even after manual adjustment.

(1) Copying, using the Factory menu

① Turn on the power.
② Enter the Panel Factory mode.
③ Display the PANEL INFORMATION page, then check if "NO DATA!" is set for "DIG. EEP".
④ Register the changed adjustment data as adjusted data, as described for the following procedures, then transfer them as backup data.



⑤ Check if "ADJUSTED" is set for "DIG. EEP" on the PANEL INFORMATION page.
⑥ Turn off the power.

(2) Copying, using the RS-232C commands

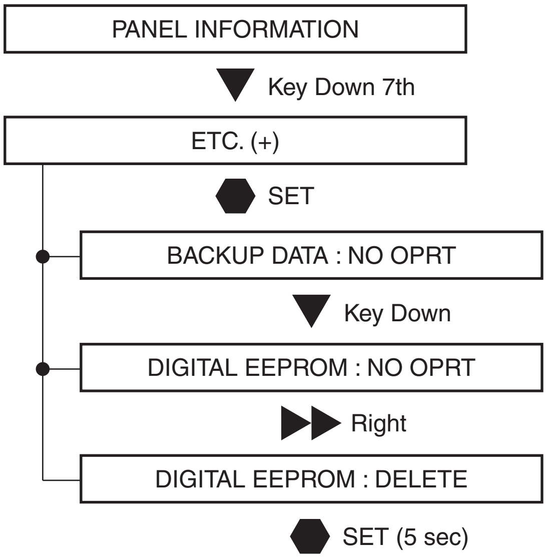
① Turn on the power.
② Issue the FAY command.
③ With the QS2 command, confirm that the main unit adjustment flag is "adjustment not completed."
④ Issue the FAJ command to register the changed adjustment data as adjusted data then transfer them as backup data.
⑤ With the QS2 command, confirm that the main unit adjustment flag becomes "adjustment completed."
⑥ Turn off the power.

3. When a secondhand DIGITAL Assy is to be reused

A DIGITAL Assy in good condition that had been mounted in another product can be reused. Before reuse, by following the procedures described below, make the data in the EEPROM on the DIGITAL Assy "adjustment not completed" data in order to prevent accidental updating of backup data when the secondhand DIGITAL Assy is mounted in another product

(1) Copying, using the Factory menu

① Turn on the power.
② Enter the Panel Factory mode.
③ Display the PANEL INFORMATION page, then check if "ADJUSTED" is set for "DIG. EEP".
④ Make the data in the EEPROM on the DIGITAL Assy "adjustment not completed" data, by following the procedures below:



⑤ Check if "NO DATA!" is set for "DIG. EEP" on the PANEL INFORMATION page.
⑥ Turn off the power.

(2) Copying, using the RS-232C commands

① Turn on the power.
② Issue the FAY command.
③ With the QS2 command, confirm that the main unit adjustment flag is "adjustment completed."
④ Issue the UAJ command to make the data in the EEPROM on the DIGITAL Assy "adjustment not completed" data.
⑤ With the QS2 command, confirm that the main unit adjustment flag becomes "adjustment not completed."
⑥ Turn off the power.

Note: If you mount a secondhand Assy to the product without performing the above procedures, the adjustment data and logs for the main unit specific to the product will be erased, and those of the secondhand Assy will be copied when the unit is turned off.

8.3 HOW TO CLEAR HISTORY DATA

■ Clearance of various logs after the Assys are replaced

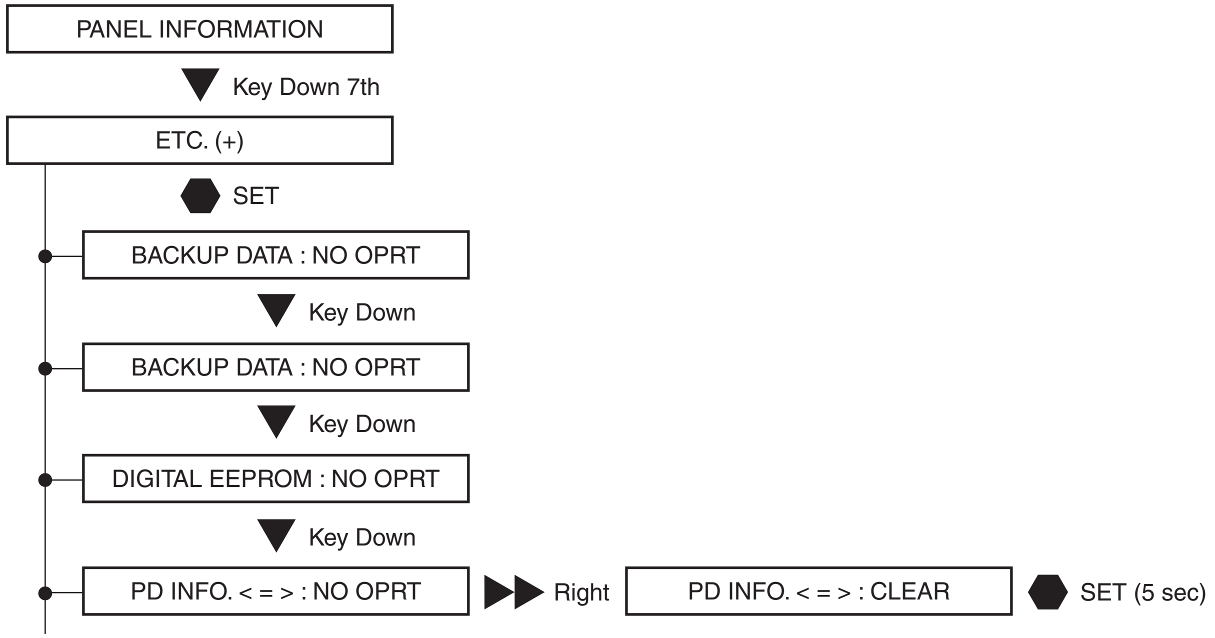
Besides adjustment data, data on accumulated power-on time and logs on defective parts of the product are backed up.
Some of those data must be cleared after the Assys are replaced for service.
Clearance of those data can be performed in the ETC layer of the Factory menu or with RS232C commands.

Item	Content	Clearing at the Replacement			Clearing method	
		Panel	**POWER SUPPLY Unit**	**Other parts**	**Factory Menu (ETC layer)**	**RS-232C Commands**
Hour-meter	Accumulated power-on time	Must be cleared	No need to be cleared	No need to be cleared	HR-MTR INFO.	CHM
Pulse-meter	Accumulated number of pulses emitted	Must be cleared (mandatory)	No need to be cleared	No need to be cleared	PM/B1-B5	CPM
Shutdown history of the panel	Causes and hour-meter values for the last eight shutdowns (SD) of the Panel	Must be cleared	No need to be cleared	No need to be cleared	SD INFO.	CSD
Power-down history	Causes and hour-meter values for the last eight power-downs (PDs) of the Panel	Must be cleared	No need to be cleared	No need to be cleared	PD INFO.	CPD
Power-on counter	Relay-on count	No need to be cleared	Must be cleared (mandatory)	No need to be cleared	P COUNT INFO.	CPC
MAX TEMP	Historical max. temperature of the panel	Must be cleared	Must be cleared	Must be cleared	MAX TEMP.	CMT

Notes:
- As the pulse-meter count is used for each correction function, the log must be cleared when the panel is replaced.
- After you clear the log, the unit must be turned off then back on again to reflect the cleared data for each correction function. If any adjustment is required after clearing the log, be sure to turn the unit off then back on again before adjustment.

(1) Clearance of logs, using the Factory menu
① Turn on the power.
② Enter the Panel Factory mode.
③ Clear the various logs, as shown in the figure below.

Note: The following example shows how to clear the PD log (PD INFO.). To clear other items, select each item you wish to clear then perform the same procedures.



④ Turn off the power.

(2) Using the RS-232C commands
① Turn on the power.
② Issue the FAY command.
③ Issue the Delete command for a log you wish to clear.
④ Turn off the power.

8.4 ADJUSTMENT WHEN THE SERVICE PANEL ASSY IS REPLACED

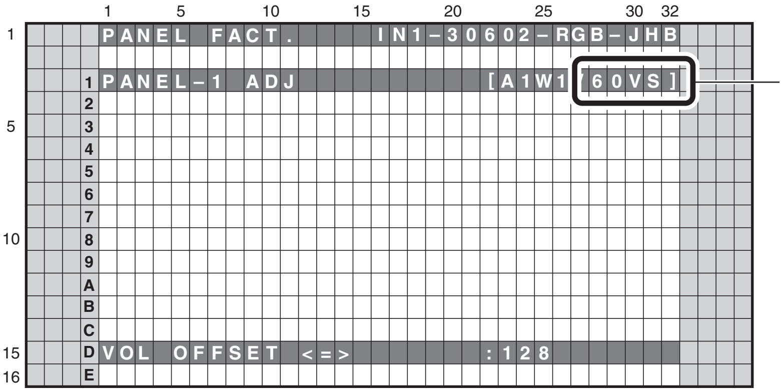
After the panel is replaced with one for service, voltage margin adjustment is required.

[Preparation]

Basically, voltage margin adjustment is performed using the Panel Factory menu.
After the panel is replaced and the unit is turned on, clear the pulse meter first.
For details on how to clear the pulse meter, see "8.3 HOW TO CLEAR HISTORY DATA".

∗1: As various corrections are made referring to the pulse-meter count to calculate how long the panel has been used, if adjustment of the panel for service is performed without clearing the pulse-meter count, proper adjustments will not be performed.

∗2: The drive sequence for Video 60-Hz is used for adjustment. When adjustment is made using the Panel Factory menu, the current drive sequence is displayed on the screen, as shown in the figure below. Make sure that 60VS is always indicated during adjustment.



```
PANEL FACT.      IN1-30602-RGB-JHB

1 PANEL-1 ADJ              [A1W1/60VS]
2
3
4
5
6
7
8
9
A
B
C
D VOL OFFSET <=>           :128
E
```

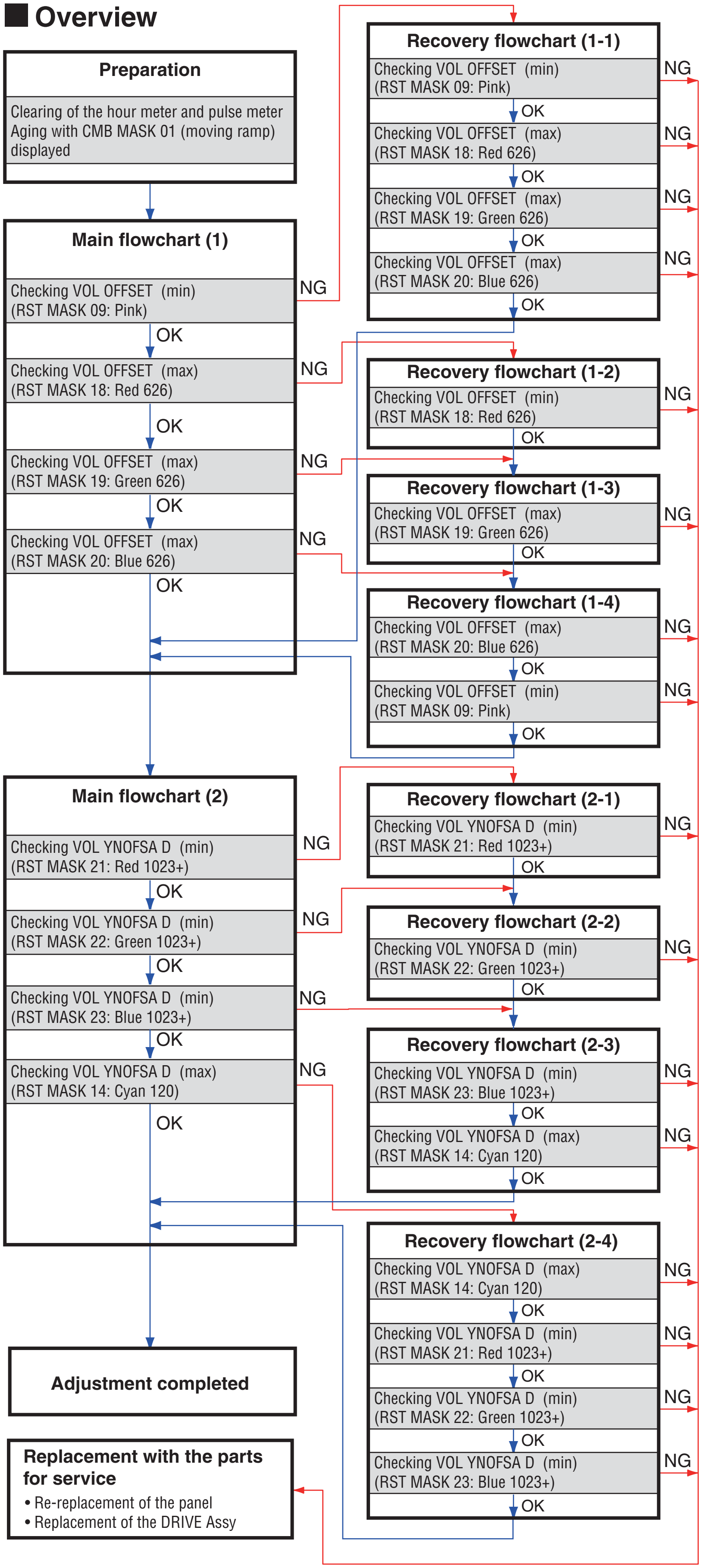
Drive sequence indication

Example of the On-Screen display during Panel Factory mode

[Supplement]

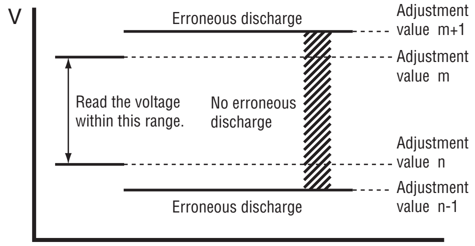
In the "PANEL-1ADJ" layer, the Panel White Balance value is reset to default, Panel Gamma is set to Straight, Noise is set to OFF, LUT mode is set to ON and Reset active control is set to OFF.
If adjustment is performed using RS232C commands, unlike the case of Factory menu operation, adjustments are not interlocked. Therefore, settings must be performed individually, by issuing commands. (See the section on preparations before adjustment.)

Overview


Preparation
Clearing of the hour meter and pulse meter
Aging with CMB MASK 01 (moving ramp) displayed
Main flowchart (1)
Checking VOL OFFSET (min)
(RST MASK 09: Pink)
NG
OK
Checking VOL OFFSET (max)
(RST MASK 18: Red 626)
NG
OK
Checking VOL OFFSET (max)
(RST MASK 19: Green 626)
NG
OK
Checking VOL OFFSET (max)
(RST MASK 20: Blue 626)
NG
OK
Recovery flowchart (1-1)
Checking VOL OFFSET (min)
(RST MASK 09: Pink)
NG
OK
Checking VOL OFFSET (max)
(RST MASK 18: Red 626)
NG
OK
Checking VOL OFFSET (max)
(RST MASK 19: Green 626)
NG
OK
Checking VOL OFFSET (max)
(RST MASK 20: Blue 626)
NG
OK
Recovery flowchart (1-2)
Checking VOL OFFSET (min)
(RST MASK 18: Red 626)
NG
OK
Recovery flowchart (1-3)
Checking VOL OFFSET (max)
(RST MASK 19: Green 626)
NG
OK
Recovery flowchart (1-4)
Checking VOL OFFSET (max)
(RST MASK 20: Blue 626)
NG
OK
Checking VOL OFFSET (min)
(RST MASK 09: Pink)
NG
OK
Main flowchart (2)
Checking VOL YNOFSA D (min)
(RST MASK 21: Red 1023+)
NG
OK
Checking VOL YNOFSA D (min)
(RST MASK 22: Green 1023+)
NG
OK
Checking VOL YNOFSA D (min)
(RST MASK 23: Blue 1023+)
NG
OK
Checking VOL YNOFSA D (max)
(RST MASK 14: Cyan 120)
NG
OK
Recovery flowchart (2-1)
Checking VOL YNOFSA D (min)
(RST MASK 21: Red 1023+)
NG
OK
Recovery flowchart (2-2)
Checking VOL YNOFSA D (min)
(RST MASK 22: Green 1023+)
NG
OK
Recovery flowchart (2-3)
Checking VOL YNOFSA D (min)
(RST MASK 23: Blue 1023+)
NG
OK
Checking VOL YNOFSA D (max)
(RST MASK 14: Cyan 120)
NG
OK
Recovery flowchart (2-4)
Checking VOL YNOFSA D (max)
(RST MASK 14: Cyan 120)
NG
OK
Checking VOL YNOFSA D (min)
(RST MASK 21: Red 1023+)
NG
OK
Checking VOL YNOFSA D (min)
(RST MASK 22: Green 1023+)
NG
OK
Checking VOL YNOFSA D (min)
(RST MASK 23: Blue 1023+)
NG
OK
Adjustment completed
Replacement with the parts for service
• Re-replacement of the panel
• Replacement of the DRIVE Assy

Range of margin measuring

Read the voltage within the hysteresis (stricter value).


V
Erroneous discharge
Adjustment value m+1
Adjustment value m
Read the voltage within this range.
No erroneous discharge
Adjustment value n
Erroneous discharge
Adjustment value n-1

Definition of limits for the voltage margins (abnormal lit/dead cells)

Abnormal lit cells:

- Five or fewer abnormal cells on the whole screen
- Two or fewer abnormal cells within a radius of 1 cm

Abnormal dead cells

- Fifteen or fewer abnormal cells on the whole screen
- Two or fewer abnormal cells within a radius of 1 cm

*: Abnormal cells visually recognizable at a distance of 1 meter from the panel must be counted.

*: Cells displayed abnormally for less than one second are not counted as abnormal cells.

Definition of tones for the measuring signals

FHD signal (1920*1080)/Video 60-Hz sequence /Dither: ON, L dither: ON, noise: OFF

Pink	RST MASK 09 (R 1023 /G 626 /B 1023)
Cyan 120	RST MASK 14 (R 0 /G 120 /B 120)
Red 626	RST MASK 18 (R 626 /G 0 /B 0)
Green 626	RST MASK 19 (R 0 /G 626 /B 0)
Blue 626	RST MASK 20 (R 0 /G 0 /B 626)
Red 1023+	RST MASK 21 (R 1023 /G 120 /B 120)
Green 1023+	RST MASK 22 (R 120 /G 1023 /B 120)
Blue 1023+	RST MASK 23 (R 120 /G 120 /B 1023)

Interlocked settings for Voltages Vyknofs1/3/4

For the 9th-generation PDPs, interlocked setting for Voltages Vyknofs1/3/4 is available on the Factory menu or with RS232C commands, for easier adjustment. Therefore, in the adjustment flowchart, the interlocked setting function is used. (Individual setting for each adjustment value is also possible, as in the conventional setting methods.

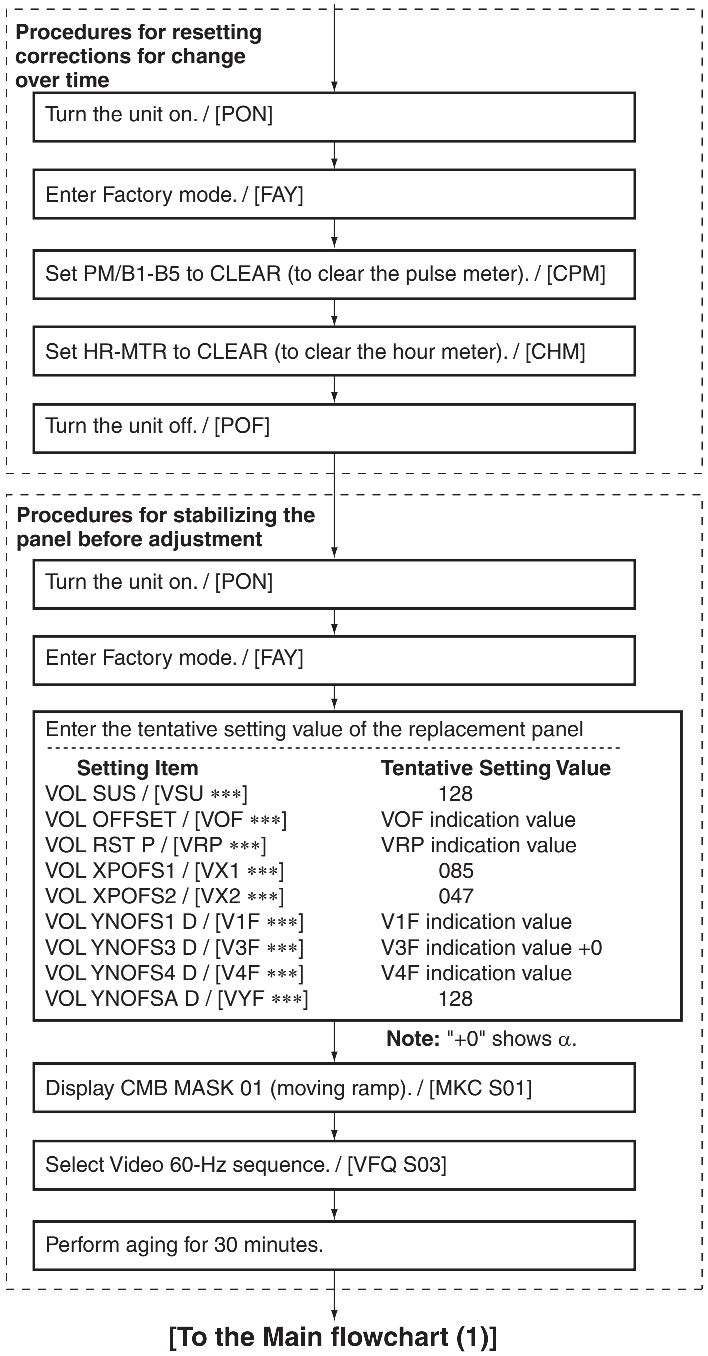
Set Voltage	Factory Menu	Command
Vyknofs1 individual	VOL YNOFS1 D	[V1F]
Vyknofs3 individual	VOL YNOFS3 D	[V3F]
Vyknofs4 individual	VOL YNOFS4 D	[V4F]
Vyknofs1,3,4 interlocked	VOL YNOFSA D	[VYF]

Note:

- The initial value for the interlocked setting value is 128, including for factory preset values.
- See "[3] DRIVE ASSY" of "5.2 DIAGNOSIS FLOWCHART OF FAILURE ANALYSIS" for calculation of actually used voltage values.

Preparation before adjustment

[Replacement with the panel for service is completed.]



Procedures for resetting corrections for change over time

Turn the unit on. / [PON]

Enter Factory mode. / [FAY]

Set PM/B1-B5 to CLEAR (to clear the pulse meter). / [CPM]

Set HR-MTR to CLEAR (to clear the hour meter). / [CHM]

Turn the unit off. / [POF]

∗ To reflect the results of log clearing for each correction function, the unit must be turned off then back on again. Before adjustment, be sure to turn the unit off then back on again.

Procedures for stabilizing the panel before adjustment

Turn the unit on. / [PON]

Enter Factory mode. / [FAY]

Enter the tentative setting value of the replacement panel

Setting Item	Tentative Setting Value
VOL SUS / [VSU ∗∗∗]	128
VOL OFFSET / [VOF ∗∗∗]	VOF indication value
VOL RST P / [VRP ∗∗∗]	VRP indication value
VOL XPOFS1 / [VX1 ∗∗∗]	085
VOL XPOFS2 / [VX2 ∗∗∗]	047
VOL YNOFS1 D / [V1F ∗∗∗]	V1F indication value
VOL YNOFS3 D / [V3F ∗∗∗]	V3F indication value +0
VOL YNOFS4 D / [V4F ∗∗∗]	V4F indication value
VOL YNOFSA D / [VYF ∗∗∗]	128

Note: "+0" shows α.

Display CMB MASK 01 (moving ramp). / [MKC S01]

Select Video 60-Hz sequence. / [VFQ S03]

Perform aging for 30 minutes.

[To the Main flowchart (1)]

Indication example of the adjustment label of service panel

AWU1340 Data **VOF=129**
VRP=031 **V1F=143** **V3F=128+α**
V4F=172 **Hour Meter__________ H**
Data 08/02/28 Chassis CXX99999
Time 18:27 Pnl FD4A0808100123

Note: The symbol "α" denotes the adjustment value plus 0.

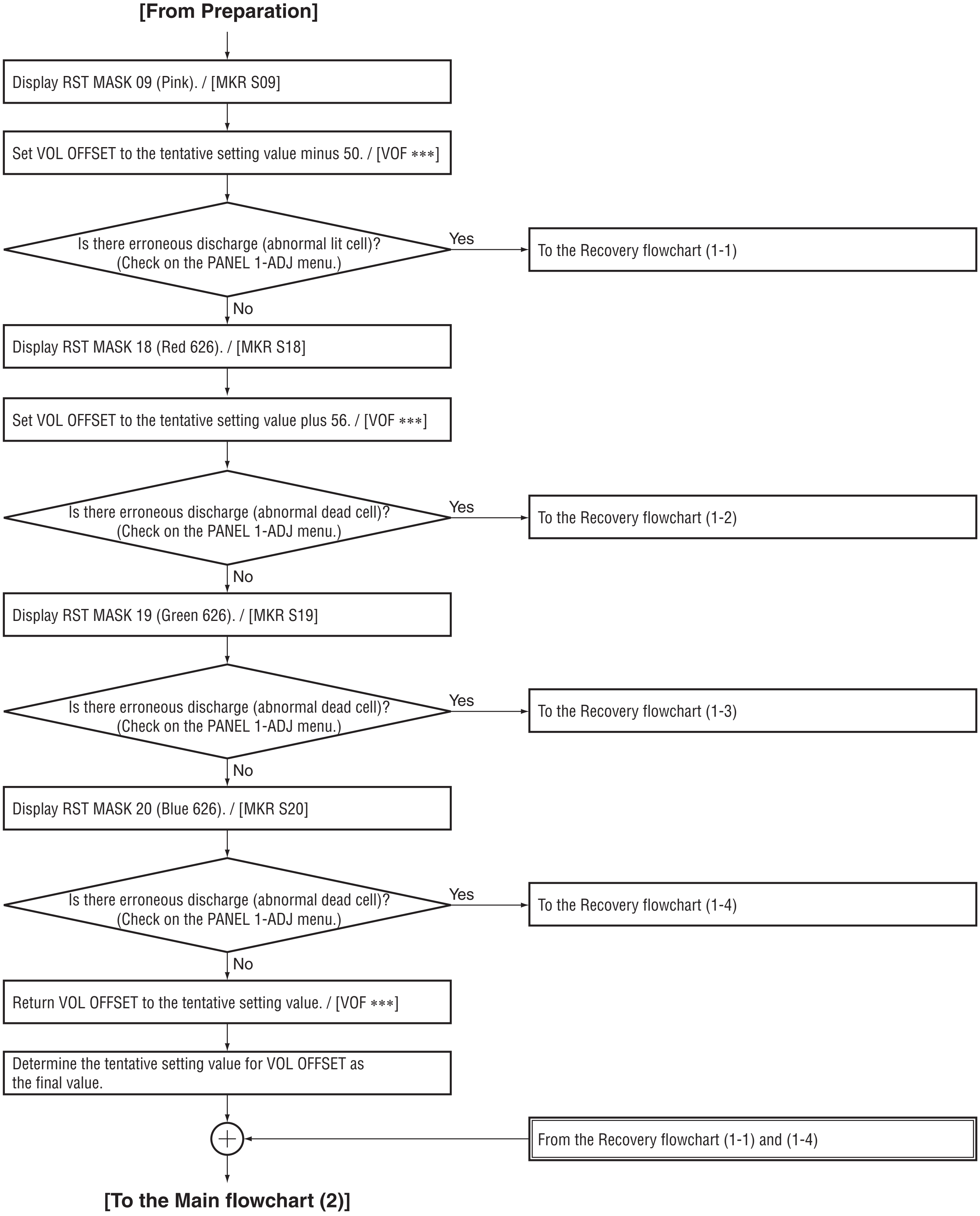
∗ Each setting value described on the adjustment label denotes an indicated data value but not a real voltage value. Therefore, just enter the data value as a setting value.

∗ To store the VFQ S03 command in memory, transmit it after displaying the mask.

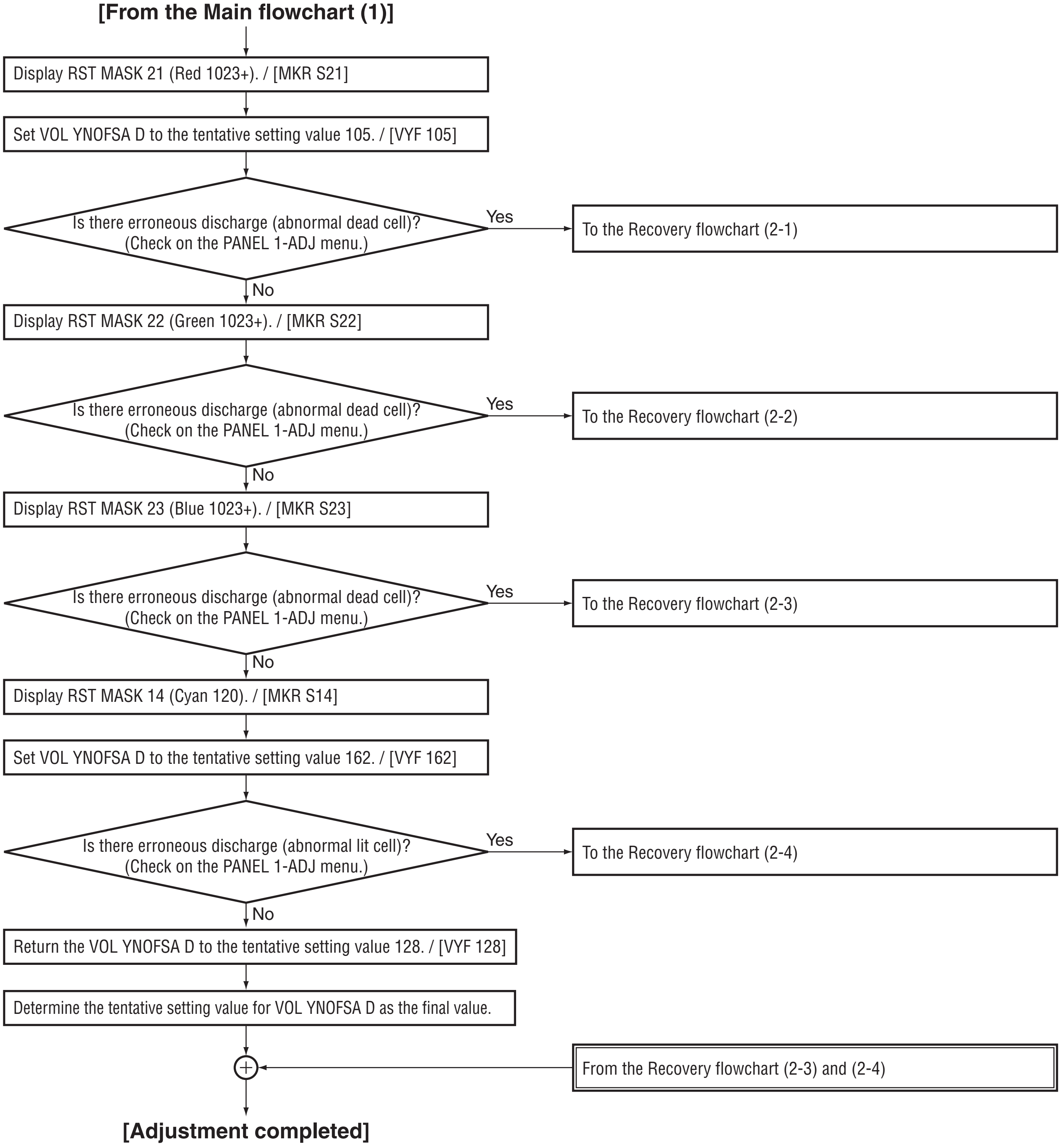
Note:
* When you perform the adjustment with RS232C commands, issue the following commands in addition.
* If the unit is shut down in the middle of performing the adjustment flowchart, reissuing of the command is required.

[PAV S00]	: To set panel drive mode to Factory
[VFQ S03]	: To set Drive Sequence to Video 60-Hz
[WBI S01]	: To temporarily reset the Panel WB adjustment value to default (WBI S00 cancels this setting.)
[PGR S00]	: To set the gamma R value to that for Factory mode
[PGG S00]	: To set the gamma G value to that for Factory mode
[PGB S00]	: To set the gamma B value to that for Factory mode
[DIZ S03]	: Dither ON, L dither ON, noise OFF.
[$1800000001]	: LUT mode ON

Main flowchart (1)...Checking VOL OFFSET


[From Preparation]
Display RST MASK 09 (Pink). / [MKR S09]
Set VOL OFFSET to the tentative setting value minus 50. / [VOF ∗∗∗]
Is there erroneous discharge (abnormal lit cell)? (Check on the PANEL 1-ADJ menu.)
Yes
To the Recovery flowchart (1-1)
No
Display RST MASK 18 (Red 626). / [MKR S18]
Set VOL OFFSET to the tentative setting value plus 56. / [VOF ∗∗∗]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
To the Recovery flowchart (1-2)
No
Display RST MASK 19 (Green 626). / [MKR S19]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
To the Recovery flowchart (1-3)
No
Display RST MASK 20 (Blue 626). / [MKR S20]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
To the Recovery flowchart (1-4)
No
Return VOL OFFSET to the tentative setting value. / [VOF ∗∗∗]
Determine the tentative setting value for VOL OFFSET as the final value.
From the Recovery flowchart (1-1) and (1-4)
[To the Main flowchart (2)]

Main flowchart (2)...Checking VOL YNOFSA D

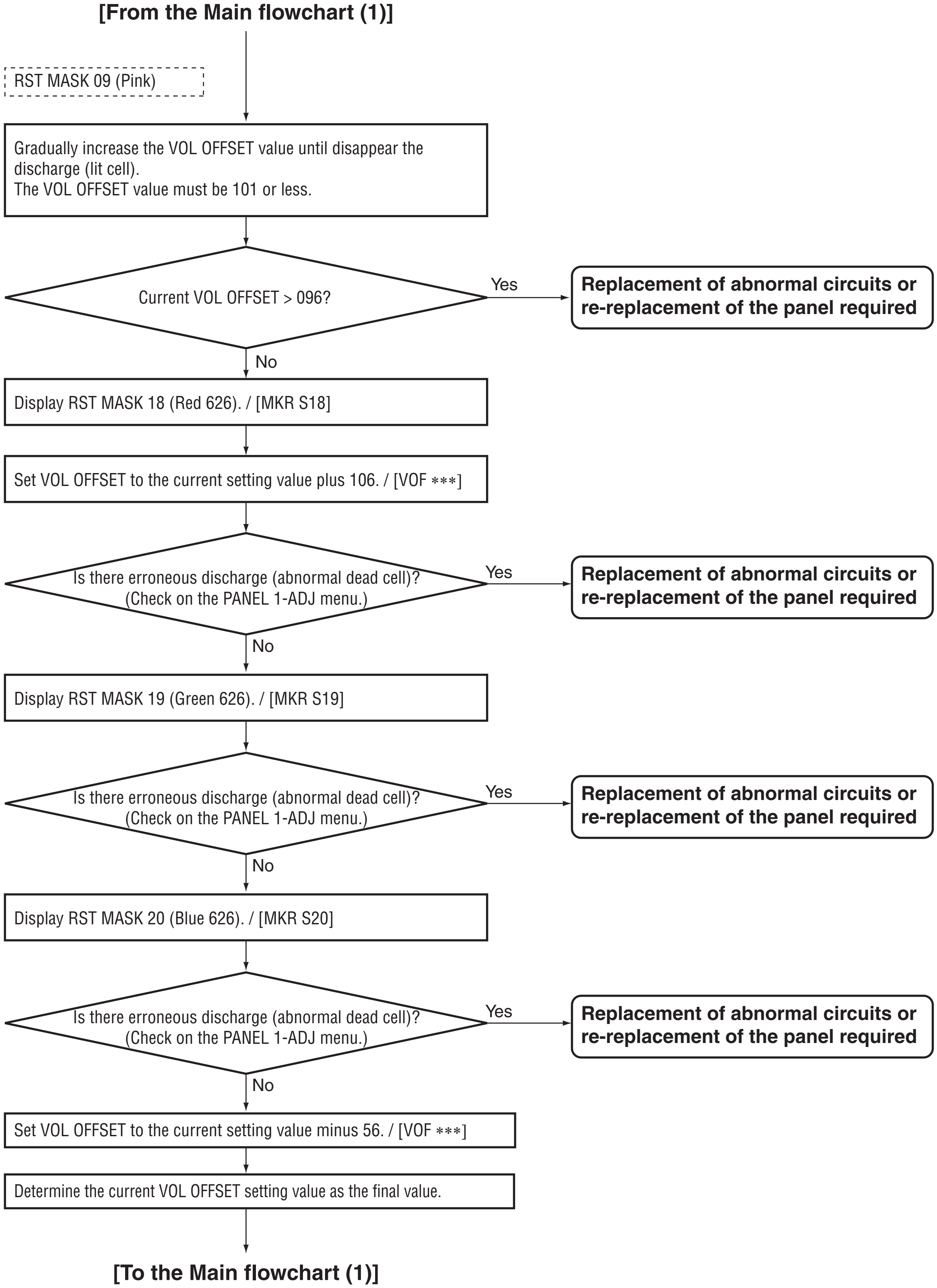

[From the Main flowchart (1)]
Display RST MASK 21 (Red 1023+). / [MKR S21]
Set VOL YNOFSA D to the tentative setting value 105. / [VYF 105]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
To the Recovery flowchart (2-1)
No
Display RST MASK 22 (Green 1023+). / [MKR S22]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
To the Recovery flowchart (2-2)
No
Display RST MASK 23 (Blue 1023+). / [MKR S23]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
To the Recovery flowchart (2-3)
No
Display RST MASK 14 (Cyan 120). / [MKR S14]
Set VOL YNOFSA D to the tentative setting value 162. / [VYF 162]
Is there erroneous discharge (abnormal lit cell)? (Check on the PANEL 1-ADJ menu.)
Yes
To the Recovery flowchart (2-4)
No
Return the VOL YNOFSA D to the tentative setting value 128. / [VYF 128]
Determine the tentative setting value for VOL YNOFSA D as the final value.
From the Recovery flowchart (2-3) and (2-4)
[Adjustment completed]

Note:
Make sure that the following values become the final setting values.

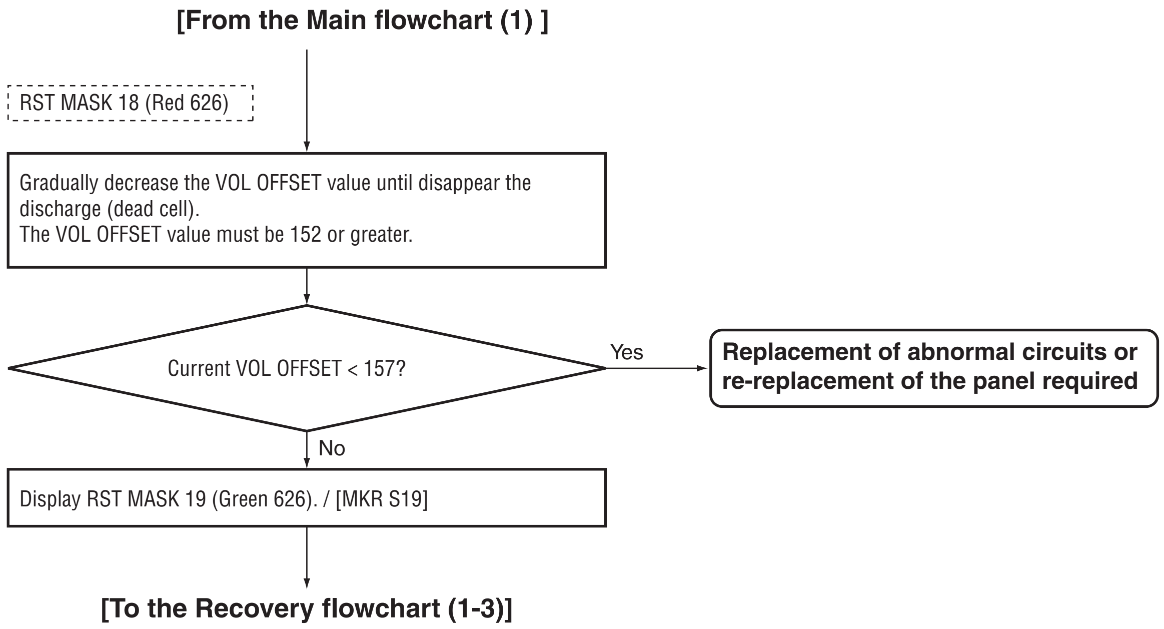
VOL SUS *1	VOL XPOSF2 *1
VOL OFFSET	VOL YNOFS1 D *1
VOL RST P *1	VOL YNOFS3 D *1
VOL XPOFS1 *1	VOL YNOFS4 D *1
	VOL YNOFS4 A

*1: The tentative setting value becomes the final value.

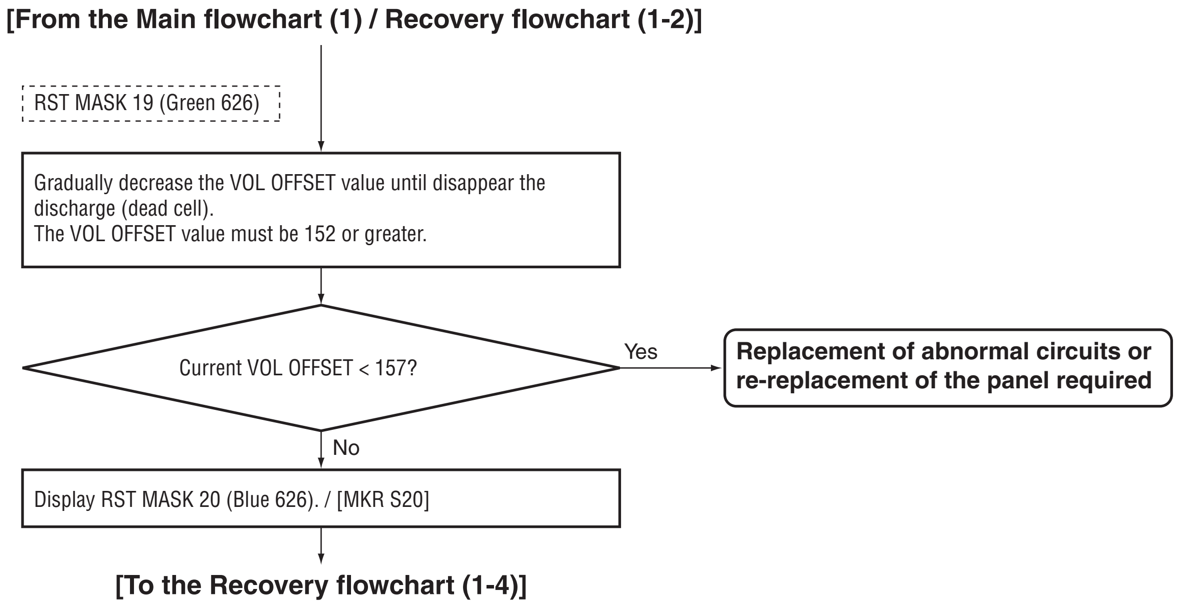
Recovery flowchart (1-1)...Changing the VOL OFFSET setting


[From the Main flowchart (1)]
RST MASK 09 (Pink)
Gradually increase the VOL OFFSET value until disappear the discharge (lit cell).
The VOL OFFSET value must be 101 or less.
Current VOL OFFSET > 096?
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 18 (Red 626). / [MKR S18]
Set VOL OFFSET to the current setting value plus 106. / [VOF ***]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 19 (Green 626). / [MKR S19]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 20 (Blue 626). / [MKR S20]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Set VOL OFFSET to the current setting value minus 56. / [VOF ***]
Determine the current VOL OFFSET setting value as the final value.
[To the Main flowchart (1)]

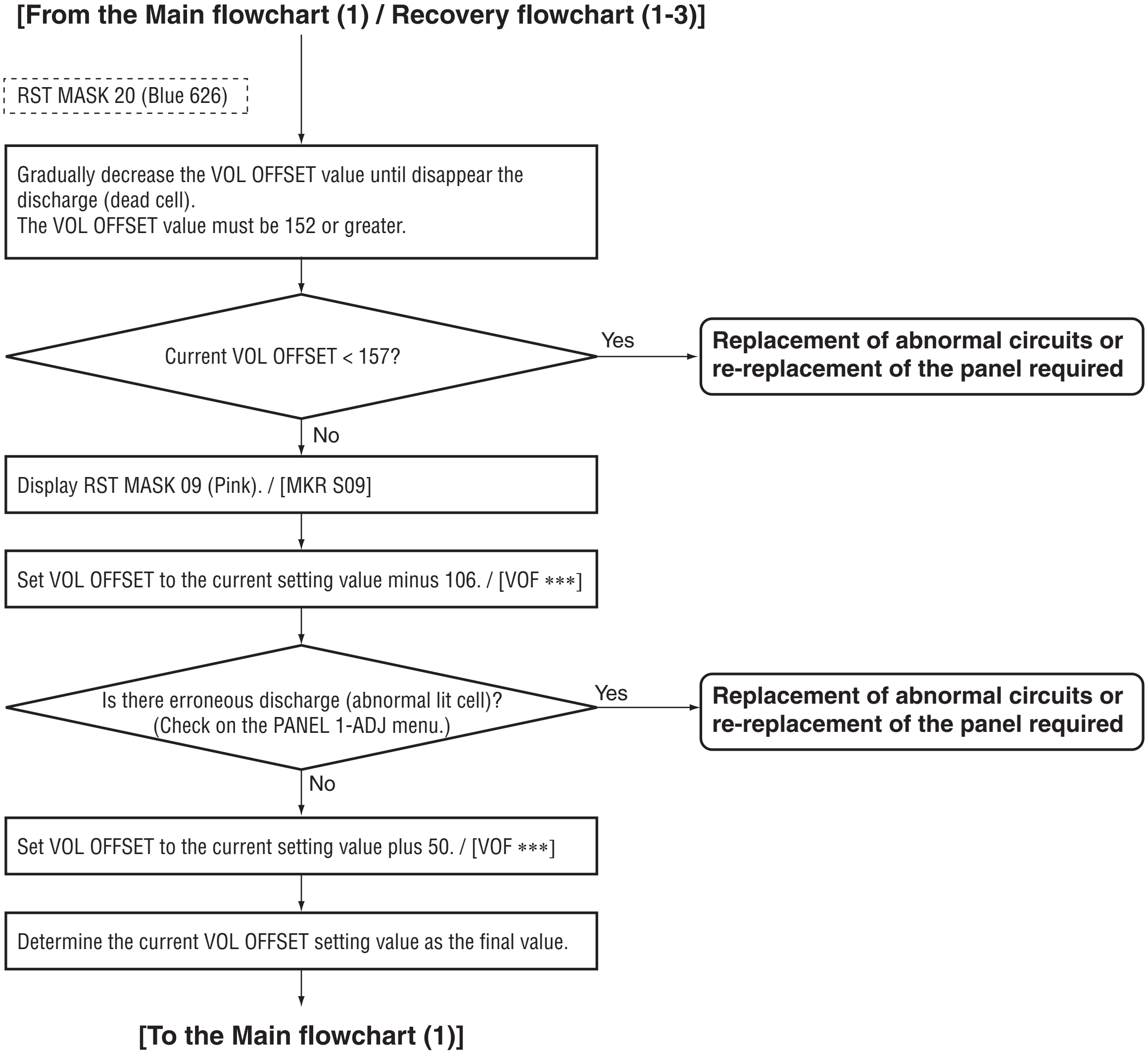
Recovery flowchart (1-2)...Changing the VOL OFFSET setting


[From the Main flowchart (1)]
RST MASK 18 (Red 626)
Gradually decrease the VOL OFFSET value until disappear the discharge (dead cell).
The VOL OFFSET value must be 152 or greater.
Current VOL OFFSET < 157?
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 19 (Green 626). / [MKR S19]
[To the Recovery flowchart (1-3)]

Recovery flowchart (1-3)...Changing the VOL OFFSET setting


[From the Main flowchart (1) / Recovery flowchart (1-2)]
RST MASK 19 (Green 626)
Gradually decrease the VOL OFFSET value until disappear the discharge (dead cell).
The VOL OFFSET value must be 152 or greater.
Current VOL OFFSET < 157?
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 20 (Blue 626). / [MKR S20]
[To the Recovery flowchart (1-4)]

Recovery flowchart (1-4)...Changing the VOL OFFSET setting



[From the Main flowchart (1) / Recovery flowchart (1-3)]

RST MASK 20 (Blue 626)

Gradually decrease the VOL OFFSET value until disappear the discharge (dead cell).
The VOL OFFSET value must be 152 or greater.

Current VOL OFFSET < 157?

Yes: **Replacement of abnormal circuits or re-replacement of the panel required**

No: Display RST MASK 09 (Pink). / [MKR S09]

Set VOL OFFSET to the current setting value minus 106. / [VOF ∗∗∗]

Is there erroneous discharge (abnormal lit cell)?
(Check on the PANEL 1-ADJ menu.)

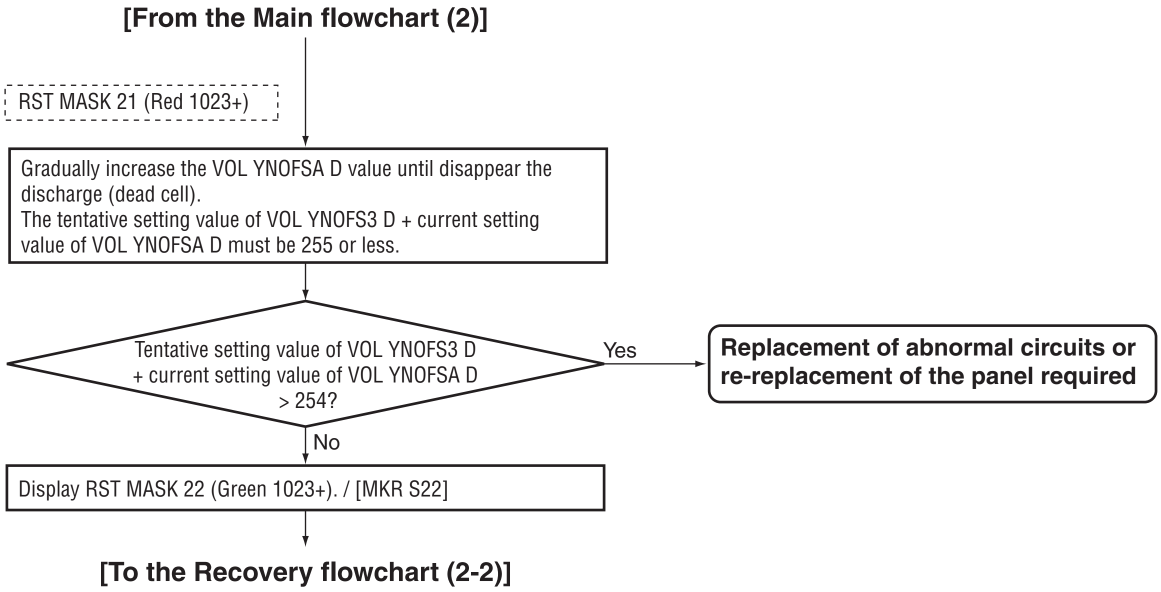
Yes: **Replacement of abnormal circuits or re-replacement of the panel required**

No: Set VOL OFFSET to the current setting value plus 50. / [VOF ∗∗∗]

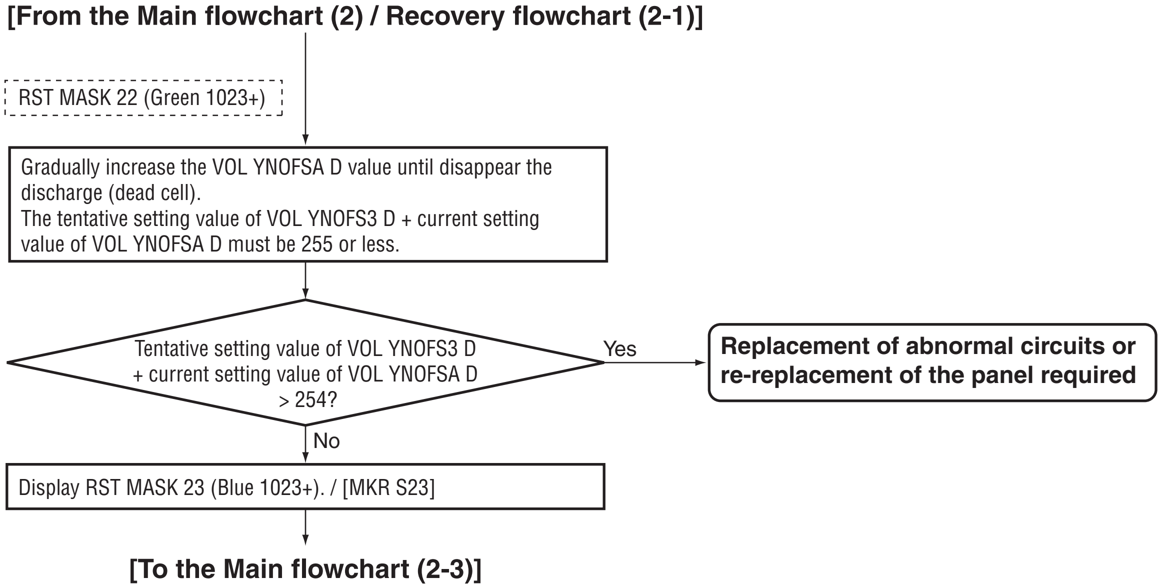
Determine the current VOL OFFSET setting value as the final value.

[To the Main flowchart (1)]

Recovery flowchart (2-1)...Changing the VOL YNOFSA D setting

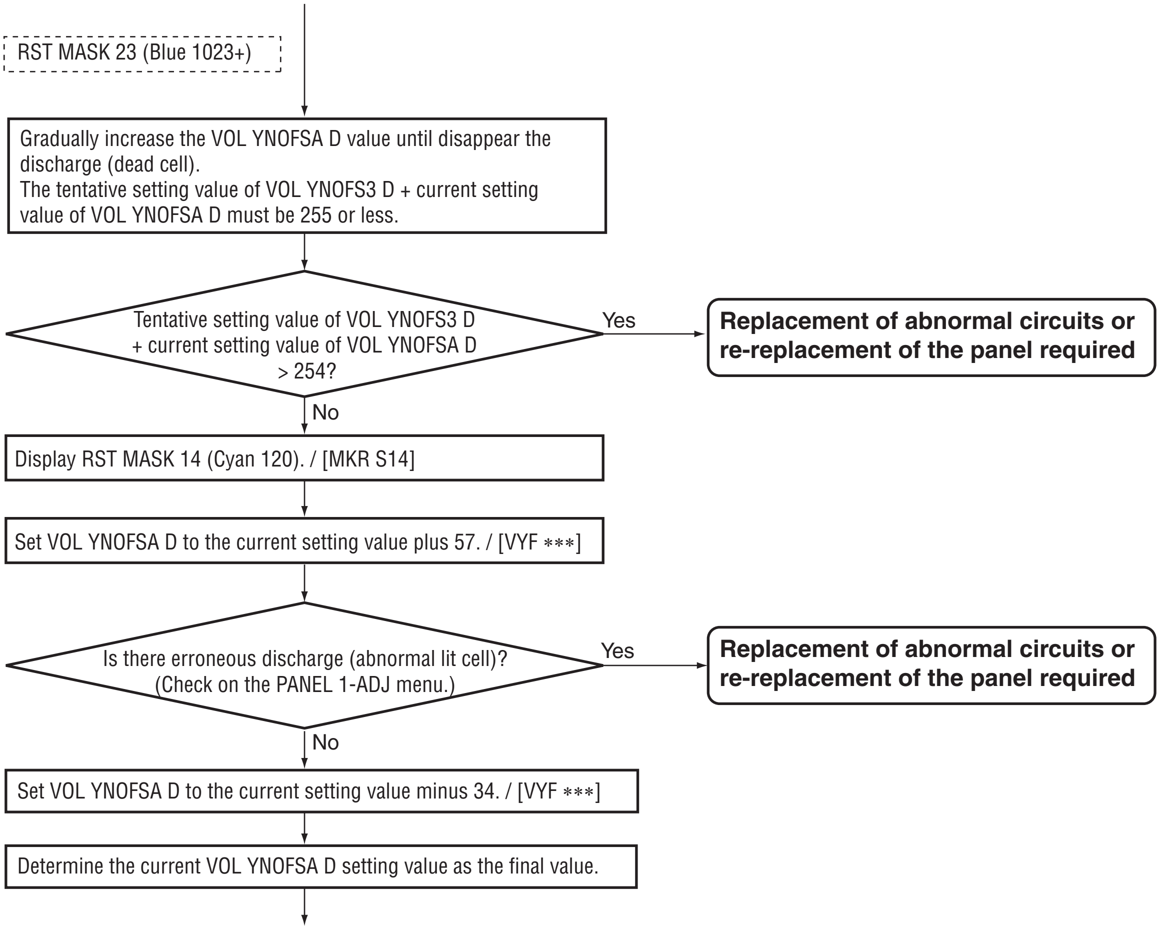

[From the Main flowchart (2)]
RST MASK 21 (Red 1023+)
Gradually increase the VOL YNOFSA D value until disappear the discharge (dead cell).
The tentative setting value of VOL YNOFS3 D + current setting value of VOL YNOFSA D must be 255 or less.
Tentative setting value of VOL YNOFS3 D + current setting value of VOL YNOFSA D > 254?
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 22 (Green 1023+). / [MKR S22]
[To the Recovery flowchart (2-2)]

Recovery flowchart (2-2)...Changing the VOL YNOFSA D setting


[From the Main flowchart (2) / Recovery flowchart (2-1)]
RST MASK 22 (Green 1023+)
Gradually increase the VOL YNOFSA D value until disappear the discharge (dead cell).
The tentative setting value of VOL YNOFS3 D + current setting value of VOL YNOFSA D must be 255 or less.
Tentative setting value of VOL YNOFS3 D + current setting value of VOL YNOFSA D > 254?
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 23 (Blue 1023+). / [MKR S23]
[To the Main flowchart (2-3)]

Recovery flowchart (2-3)...Changing the VOL YNOFSA D setting

[From the Main flowchart (2) / Recovery flowchart (2-2)]



RST MASK 23 (Blue 1023+)

Gradually increase the VOL YNOFSA D value until disappear the discharge (dead cell).
The tentative setting value of VOL YNOFS3 D + current setting value of VOL YNOFSA D must be 255 or less.

Tentative setting value of VOL YNOFS3 D + current setting value of VOL YNOFSA D > 254?

Replacement of abnormal circuits or re-replacement of the panel required

Display RST MASK 14 (Cyan 120). / [MKR S14]

Set VOL YNOFSA D to the current setting value plus 57. / [VYF ∗∗∗]

Is there erroneous discharge (abnormal lit cell)?
(Check on the PANEL 1-ADJ menu.)

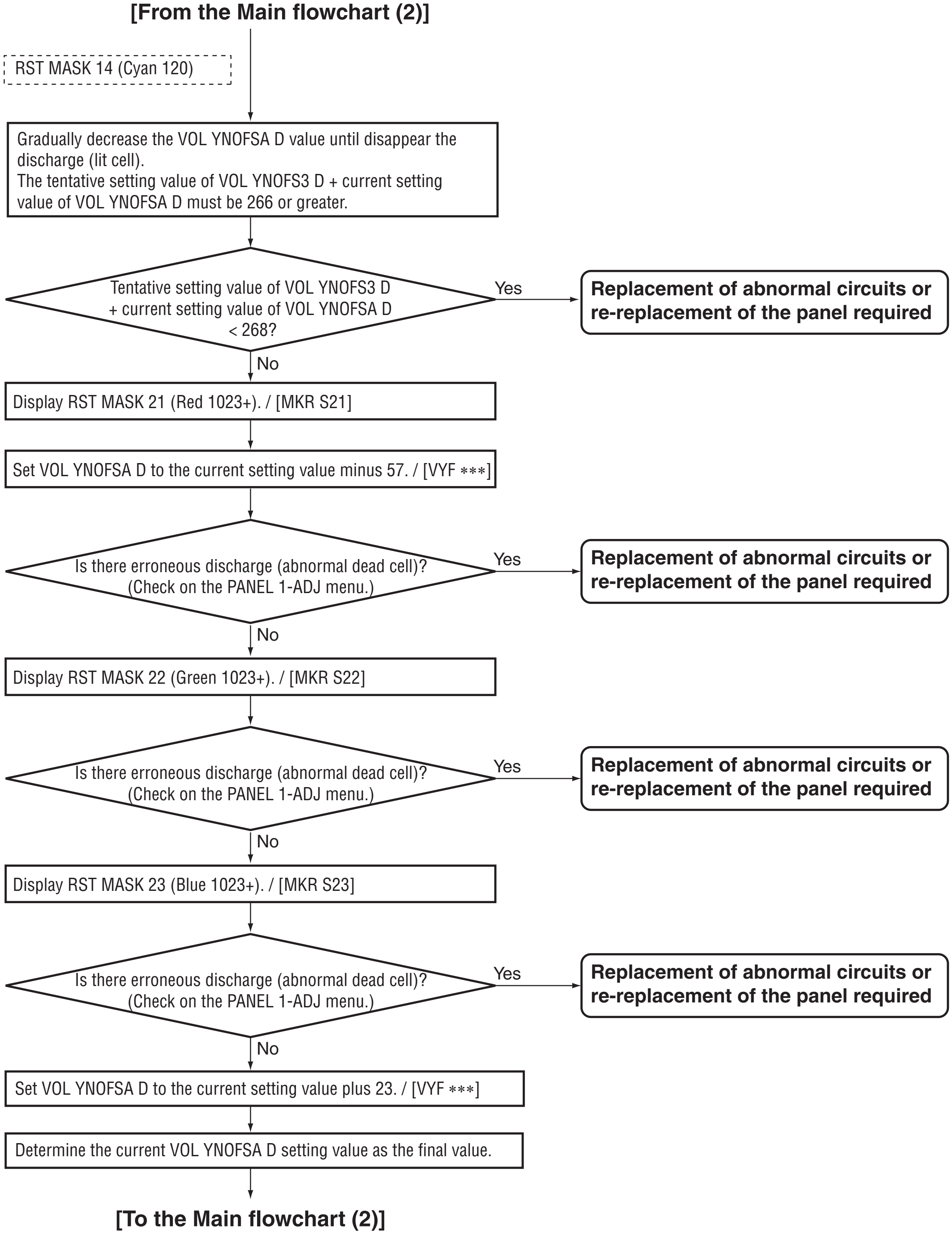
Replacement of abnormal circuits or re-replacement of the panel required

Set VOL YNOFSA D to the current setting value minus 34. / [VYF ∗∗∗]

Determine the current VOL YNOFSA D setting value as the final value.

[To the Main flowchart (2)]

Recovery flowchart (2-4)...Changing the VOL YNOFSA D setting


[From the Main flowchart (2)]
RST MASK 14 (Cyan 120)
Gradually decrease the VOL YNOFSA D value until disappear the discharge (lit cell).
The tentative setting value of VOL YNOFS3 D + current setting value of VOL YNOFSA D must be 266 or greater.
Tentative setting value of VOL YNOFS3 D + current setting value of VOL YNOFSA D < 268?
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 21 (Red 1023+). / [MKR S21]
Set VOL YNOFSA D to the current setting value minus 57. / [VYF ∗∗∗]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 22 (Green 1023+). / [MKR S22]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Display RST MASK 23 (Blue 1023+). / [MKR S23]
Is there erroneous discharge (abnormal dead cell)? (Check on the PANEL 1-ADJ menu.)
Yes
Replacement of abnormal circuits or re-replacement of the panel required
No
Set VOL YNOFSA D to the current setting value plus 23. / [VYF ∗∗∗]
Determine the current VOL YNOFSA D setting value as the final value.
[To the Main flowchart (2)]

8.5 ADJUSTMENT WHEN THE DRIVE ASSYS ARE REPLACED

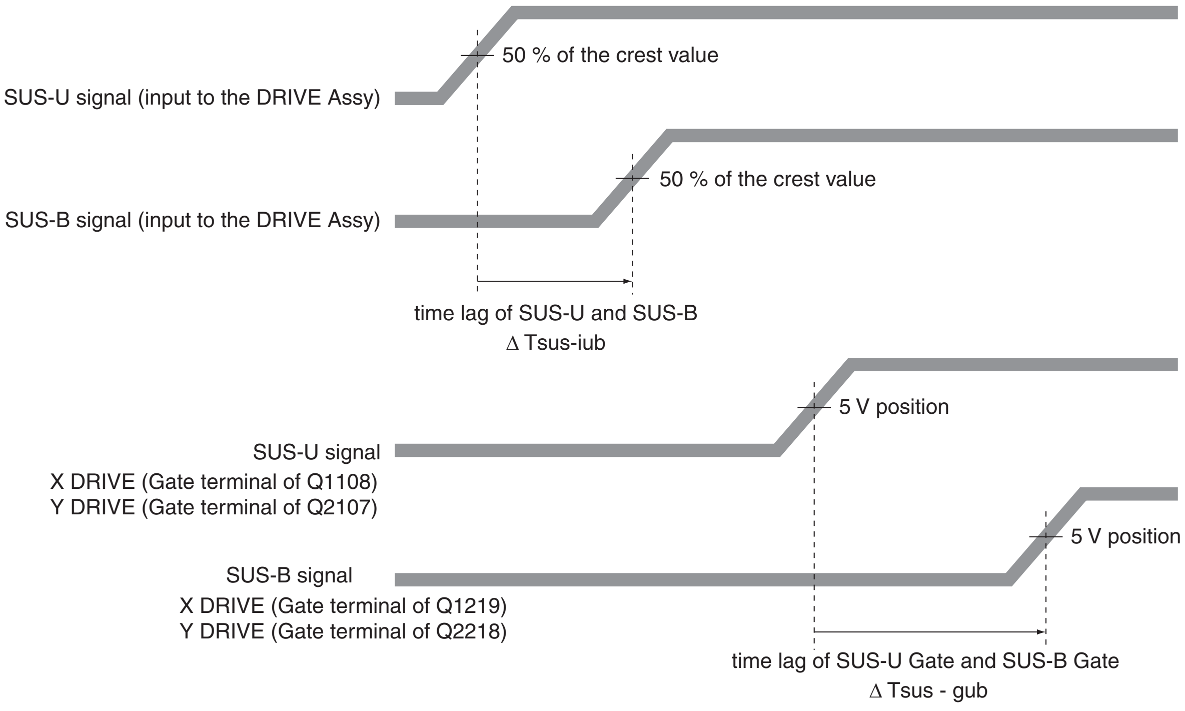
■ Waveform adjustments required when replacing the following parts of the X DRIVE and Y DRIVE Assys.

Assy Name	Ref No.	Part Name	Part Category	Remarks
X DRIVE Assy	IC1101	PS9818-1(P)	Photo Coupler	
	IC1104	TND307TD	FET Driver	
	IC1204	PS9818-2(P)	Photo Coupler	
	IC1209	TND307TD	FET Driver	
Y DRIVE Assy	IC2101	PS9818-1(P)	Photo Coupler	
	IC2103	TND307TD	FET Driver	
	IC2201	PS9818-1(P)	Photo Coupler	
	IC2203	TND307TD	FET Driver	

■ TIME LAG ADJUSTMENT OF THE CONTROL SIGNAL (SUS-B)

① Measure the time lag for the SUS-U signal to the SUS-B signal.
② Check the time lag for the SUS-B Gate signal to the SUS-U Gate siganl.
Adjust the variable control so that the time lag of Gate becomes " time lag of input signal + α ± 5 nsec."

Note: • Be sure to set the Drive to OFF for adjustment.
• For details on measuring points of waveform, see the figure below.


50 % of the crest value
SUS-U signal (input to the DRIVE Assy)
50 % of the crest value
SUS-B signal (input to the DRIVE Assy)
time lag of SUS-U and SUS-B
Δ Tsus-iub
5 V position
SUS-U signal
X DRIVE (Gate terminal of Q1108)
Y DRIVE (Gate terminal of Q2107)
5 V position
SUS-B signal
X DRIVE (Gate terminal of Q1219)
Y DRIVE (Gate terminal of Q2218)
time lag of SUS-U Gate and SUS-B Gate
Δ Tsus - gub

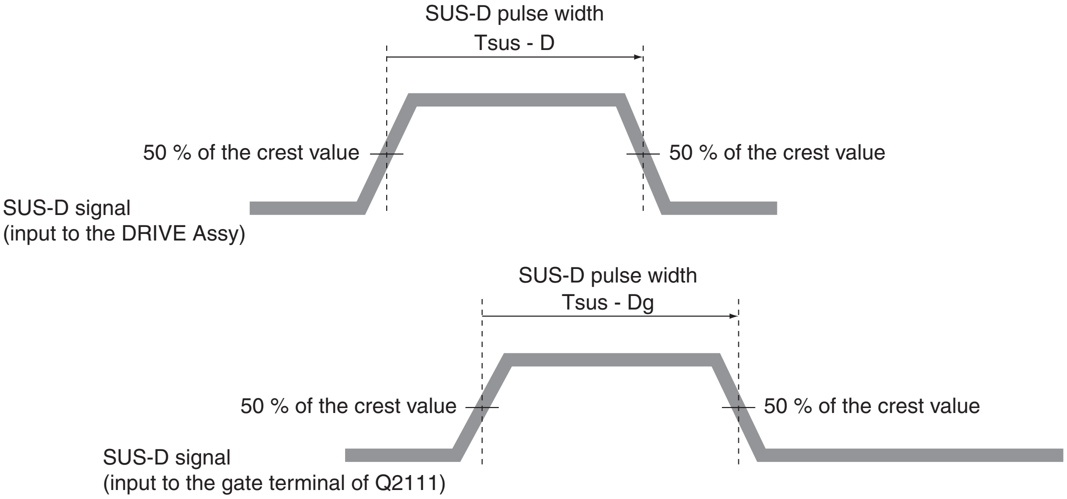
Time lag of SUS-U Gate and SUS-B Gate : Δ Tsus - gub
Adjust so that "Δ Tsus - gub = Δ Tsus - iub + α ± 5 nsec," using the variable controls shown in the table below:

Assy	VR	Value of α
X DRIVE Assy	VR1002	60 nsec
Y DRIVE Assy	VR2002	60 nsec

DELAY ADJUSTMENT OF THE CONTROL SIGNAL (SUS-D)

① Measure the pulse width of the SUS-D signal.
② Check the pulse width of the SUS-D input signal (gate terminal of Q2111).
Adjust the variable control so that the pulse width of the SUS-D input signal (gate terminal of Q2111) becomes the same pulse width ± 5 nsec as the SUS-D signal.

Note: • For details on measuring points of waveform, see the figure below.

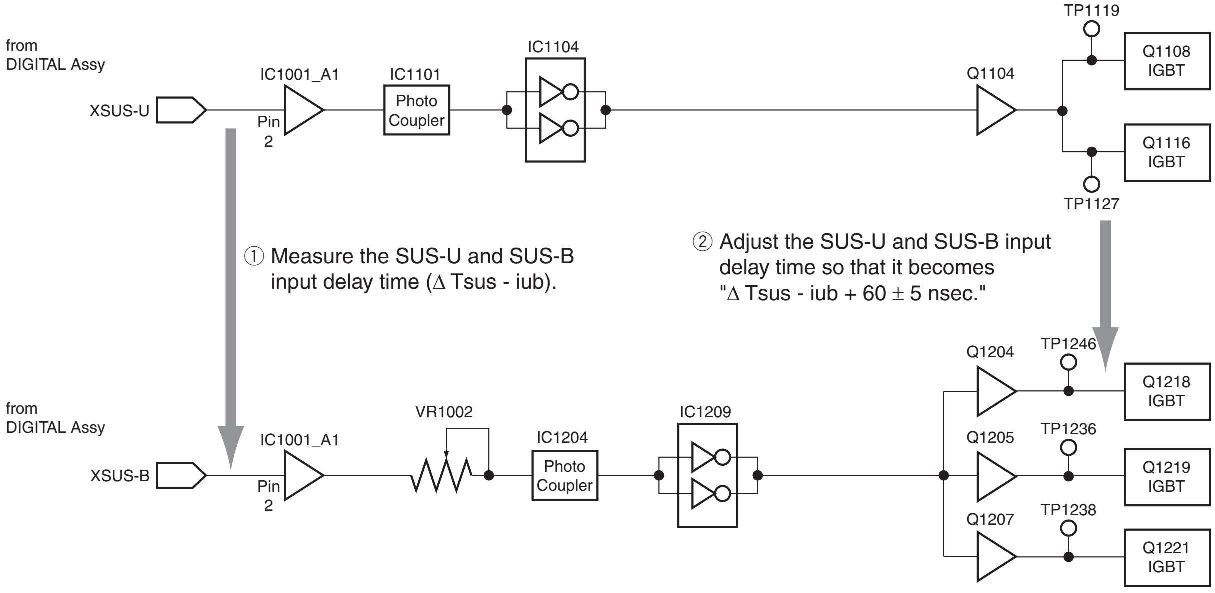

SUS-D pulse width
Tsus - D
50 % of the crest value
50 % of the crest value
SUS-D signal
(input to the DRIVE Assy)
SUS-D pulse width
Tsus - Dg
50 % of the crest value
50 % of the crest value
SUS-D signal
(input to the gate terminal of Q2111)

SUS-D pulse width: Tsus - Dg
Adjust so that "Tsus - Dg = Tsus - D ± 5 nsec," using the variable control shown in the table below:

Assy	VR
Y DRIVE Assy	VR2001

SUS-B ADJUSTMENT

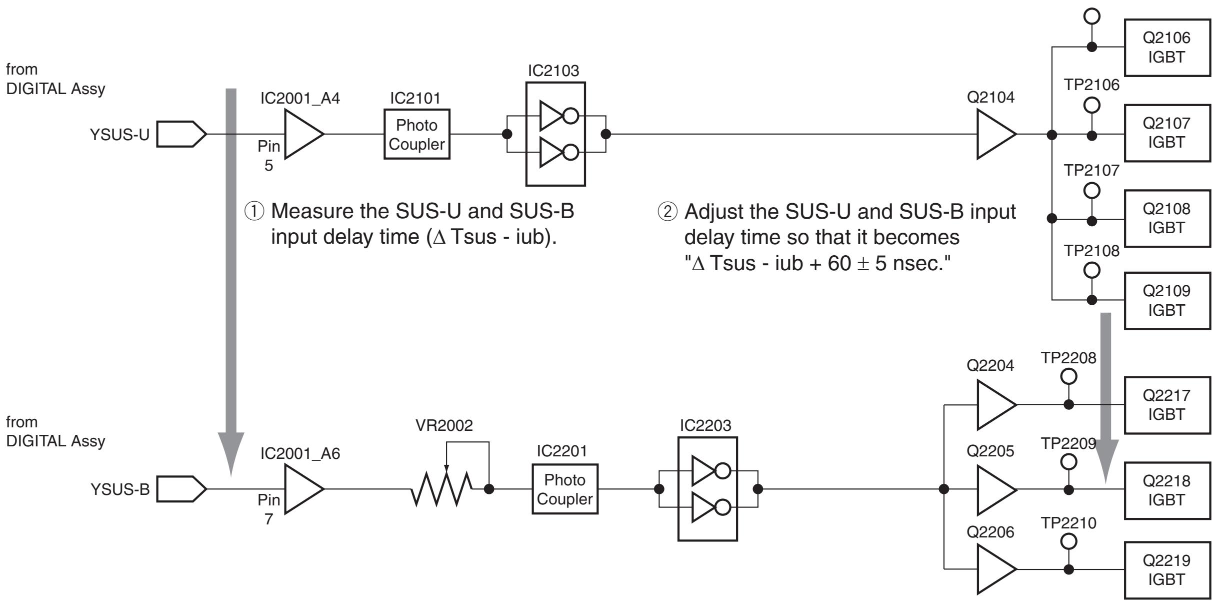
X DRIVE Assy


from
DIGITAL Assy
XSUS-U
IC1001_A1
Pin
2
IC1101
Photo
Coupler
IC1104
Q1104
TP1119
Q1108
IGBT
Q1116
IGBT
TP1127
from
DIGITAL Assy
XSUS-B
IC1001_A1
Pin
2
VR1002
IC1204
Photo
Coupler
IC1209
Q1204
Q1205
Q1207
TP1246
TP1236
TP1238
Q1218
IGBT
Q1219
IGBT
Q1221
IGBT

① Measure the SUS-U and SUS-B input delay time (Δ Tsus - iub).

② Adjust the SUS-U and SUS-B input delay time so that it becomes "Δ Tsus - iub + 60 ± 5 nsec."

Y DRIVE Assy


TP2105
from
DIGITAL Assy
YSUS-U
IC2001_A4
Pin
5
IC2101
Photo
Coupler
IC2103
Q2104
Q2106
IGBT
TP2106
Q2107
IGBT
TP2107
Q2108
IGBT
TP2108
Q2109
IGBT
from
DIGITAL Assy
YSUS-B
IC2001_A6
Pin
7
VR2002
IC2201
Photo
Coupler
IC2203
Q2204
Q2205
Q2206
TP2208
TP2209
TP2210
Q2217
IGBT
Q2218
IGBT
Q2219
IGBT

① Measure the SUS-U and SUS-B input delay time (Δ Tsus - iub).

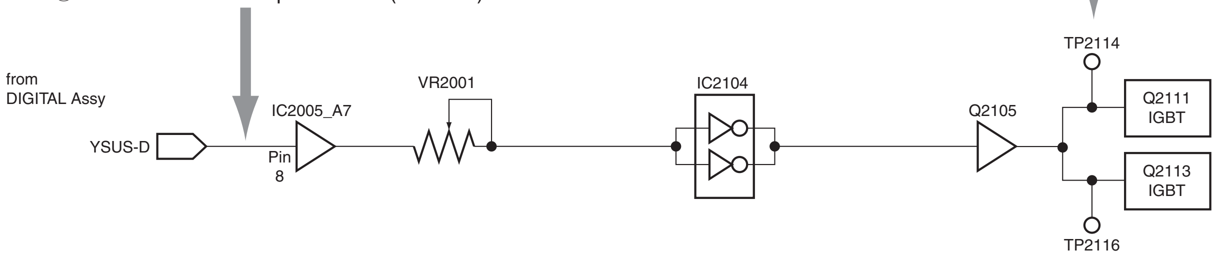
② Adjust the SUS-U and SUS-B input delay time so that it becomes "Δ Tsus - iub + 60 ± 5 nsec."

SUS-D ADJUSTMENT

Y DRIVE Assy

② Adjust the pulse width (Tsus - Dg) of the SUS-D input signal so that it becomes "Tsus-D ± 5 nsec."

① Measure the SUS-D pulse width (Tsus - D).


TP2114
from
DIGITAL Assy
YSUS-D
IC2005_A7
Pin
8
VR2001
IC2104
Q2105
Q2111
IGBT
Q2113
IGBT
TP2116

8.6 ADJUSTMENT WHEN THE MAIN OR IO_AUDIO ASSY IS REPLACED

Explanation

To correct differences in IC output levels and signal levels upon AD conversion, adjustment is performed throughout the path. Therefore, if any of the following devices is replaced, the entire adjustment must be performed again.

IC8001	AV_SW	R2S11006FT
IC8101	RGB_SW	R2S11001FT
IC4702	VDEC	CM0048AF
IC4801	ADC	AD9985KSTZ-110

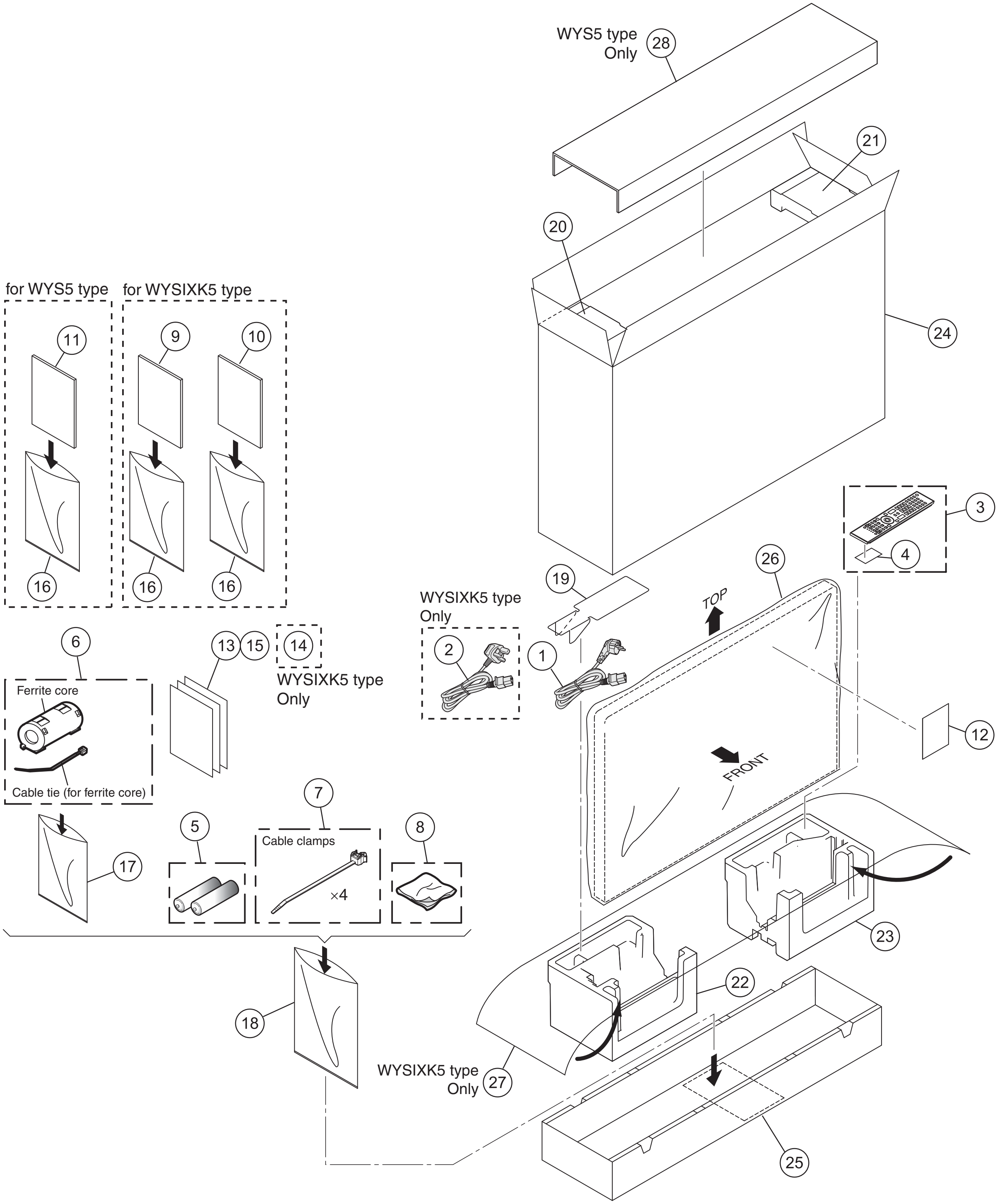
Adjustment Procedure

Perform the "AUTO ADJUSTMENT" on the "6.2 [4] INITIALIZE".

9. EXPLODED VIEWS AND PARTS LIST

NOTES:
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to ▼ mark on product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)

9.1 PACKING SECTION


WYS5 type Only
28
21
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24
for WYS5 type
for WYSIXK5 type
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10
16
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3
4
26
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WYSIXK5 type Only
TOP
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1
6
13
15
14
WYSIXK5 type Only
Ferrite core
Cable tie (for ferrite core)
12
FRONT
7
Cable clamps
×4
5
8
17
23
22
18
WYSIXK5 type Only
27
25

(1) PACKING SECTION PARTS LIST

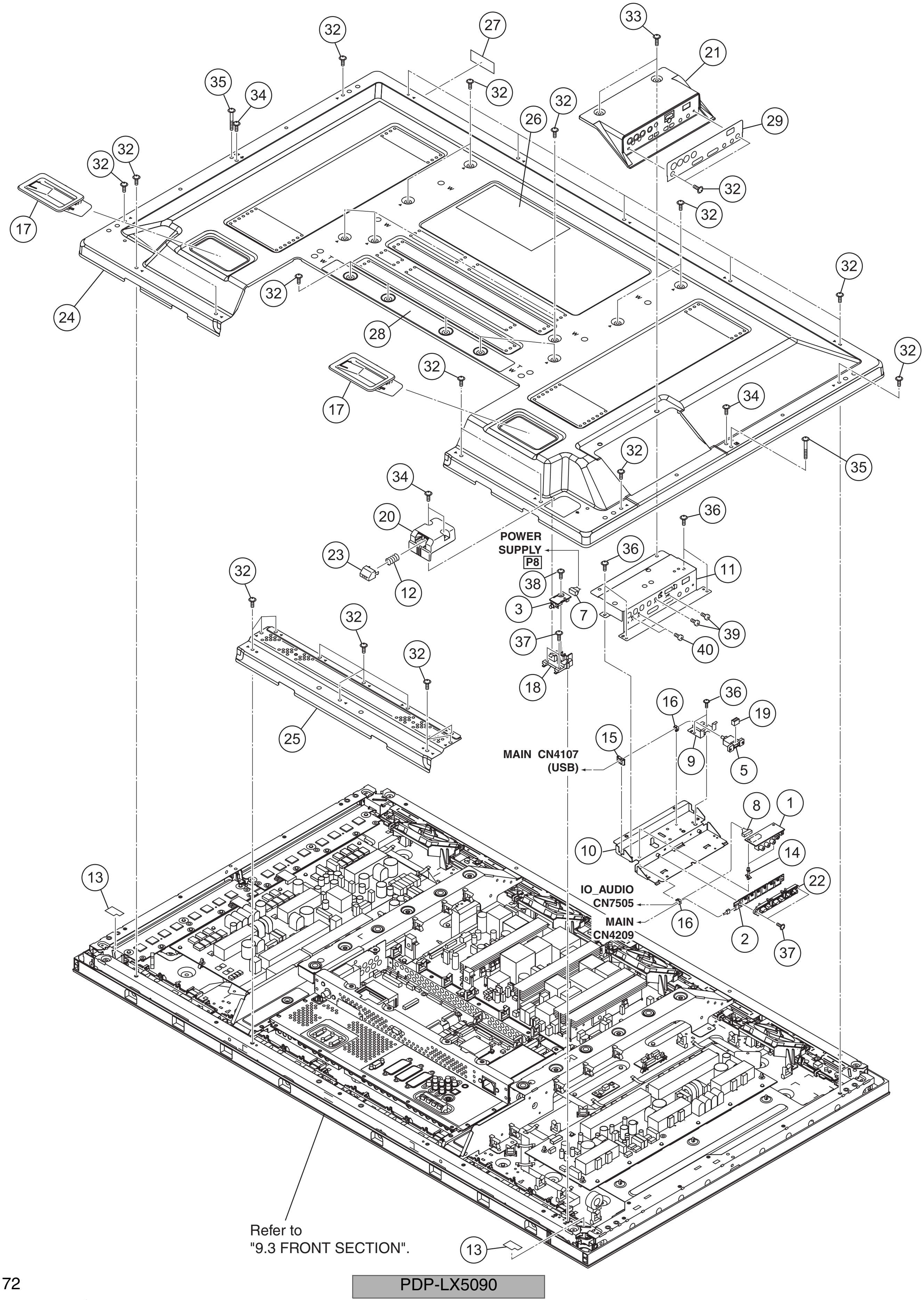
Mark	No.	Description	Part No.
⚠	1	Power Cable (2 m)	ADG1214
⚠	2	Power Cable (2 m)	See Contrast table (2)
	3	Remote Control Unit	AXD1564
	4	Battery Cover (Black)	AZN2784
NSP	5	Dry Cell Battery (R6, AA)	VEM1031
⚠	6	Ferrite Core	ATX1039
	7	Binder Assy	AEC2158
	8	Cleaning Cloth	AED1285
	9	Operating Instructions (English / French / German)	See Contrast table (2)
	10	Operating Instructions (Italian / Dutch / Spanish / Russian)	See Contrast table (2)
	11	Operating Instructions (Russian)	See Contrast table (2)
	12	Caution Card	See Contrast table (2)
	13	Cleaning Caution	See Contrast table (2)
	14	Block Diagram (509)	See Contrast table (2)
NSP	15	Warranty Card EU	See Contrast table (2)
	16	Vinyl Bag	AHG1310
	17	Vinyl Bag	AHG1337
NSP	18	Vinyl Bag	AHG1340
	19	Power Cord Lid (5090)	See Contrast table (2)
	20	Pad (509 T-L EU)	See Contrast table (2)
	21	Pad (509 T-R EU)	See Contrast table (2)
	22	Pad (509 B-L EU)	See Contrast table (2)
	23	Pad (509 B-R EU)	See Contrast table (2)
	24	Upper Carton (5090)	See Contrast table (2)
	25	Under Carton (5090)	See Contrast table (2)
	26	Mirror Mat	AHG1284
	27	HD Sheet	See Contrast table (2)
	28	Carton Board (509)	See Contrast table (2)

(2) CONTRAST TABLE

PDP-LX5090/WYSIXK5 and WYS5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-LX5090 /WYSIXK5	PDP-LX5090 /WYS5
⚠	2	Power Cable (2 m)	ADG1223	Not used
	9	Operating Instructions (English / French / German)	ARE1492	Not used
	10	Operating Instructions (Italian / Dutch / Spanish / Russian)	ARC1606	Not used
	11	Operating Instructions (Russian)	Not used	ARC1618
	12	Caution Card	ARM1310	ARM1232
	13	Cleaning Caution PTK	ARM1311	Not used
	13	Cleaning Caution (11L)	Not used	ARM1283
	14	Block Diagram (509)	ARY1210	Not used
NSP	15	Warranty Card EU	ARY7112	ARY7110
	19	Power Cord Lid (5090)	AHC1113	AHC1114
	20	Pad (509 T-L EU)	AHA2714	AHA2727
	21	Pad (509 T-R EU)	AHA2715	AHA2728
	22	Pad (509 B-L EU)	AHA2716	AHA2729
	23	Pad (509 B-R EU)	AHA2726	AHA2730
	24	Upper Carton (5090)	AHD3669	AHD3670
	25	Under Carton (5090)	AHD3672	AHD3673
	27	HD Sheet	AHG1416	Not used
	28	Carton Board (509)	Not used	AHB1303

9.2 REAR SECTION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POWER SUPPLY
P8
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MAIN CN4107 (USB)
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IO_AUDIO CN7505
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MAIN CN4209
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Refer to "9.3 FRONT SECTION".

(1) REAR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	SIDE IO Assy	AWW1358
	2	SIDE KEY Assy	AWW1361
	3	POWER SW Assy	AWW1366
	4	•••••	
	5	USB Cable (J301)(120 cm)	ADF1034
	6	•••••	
	7	3P Housing Wire (J103)	ADX3630
	8	11P Housing Wire (J118)	ADX3644
	9	USB Holder	ANG3134
	10	Side Input Base	ANG3215
	11	Side Input Shield	ANG3216
	12	Coil Spring	ABH1125
	13	Sensor Cushion B (428)	AEB1486
NSP	14	PCB Spacer	AEC1084
	15	Edge Saddle	AEC1571
	16	Mini Clamp	AEC1971
	17	Inner Grip Assy	See Contrast table (2)
	18	Power Button Support	AMR3763
⚠	19	USB Gasket	ANK1962
	20	Power Button Case	AAK2927

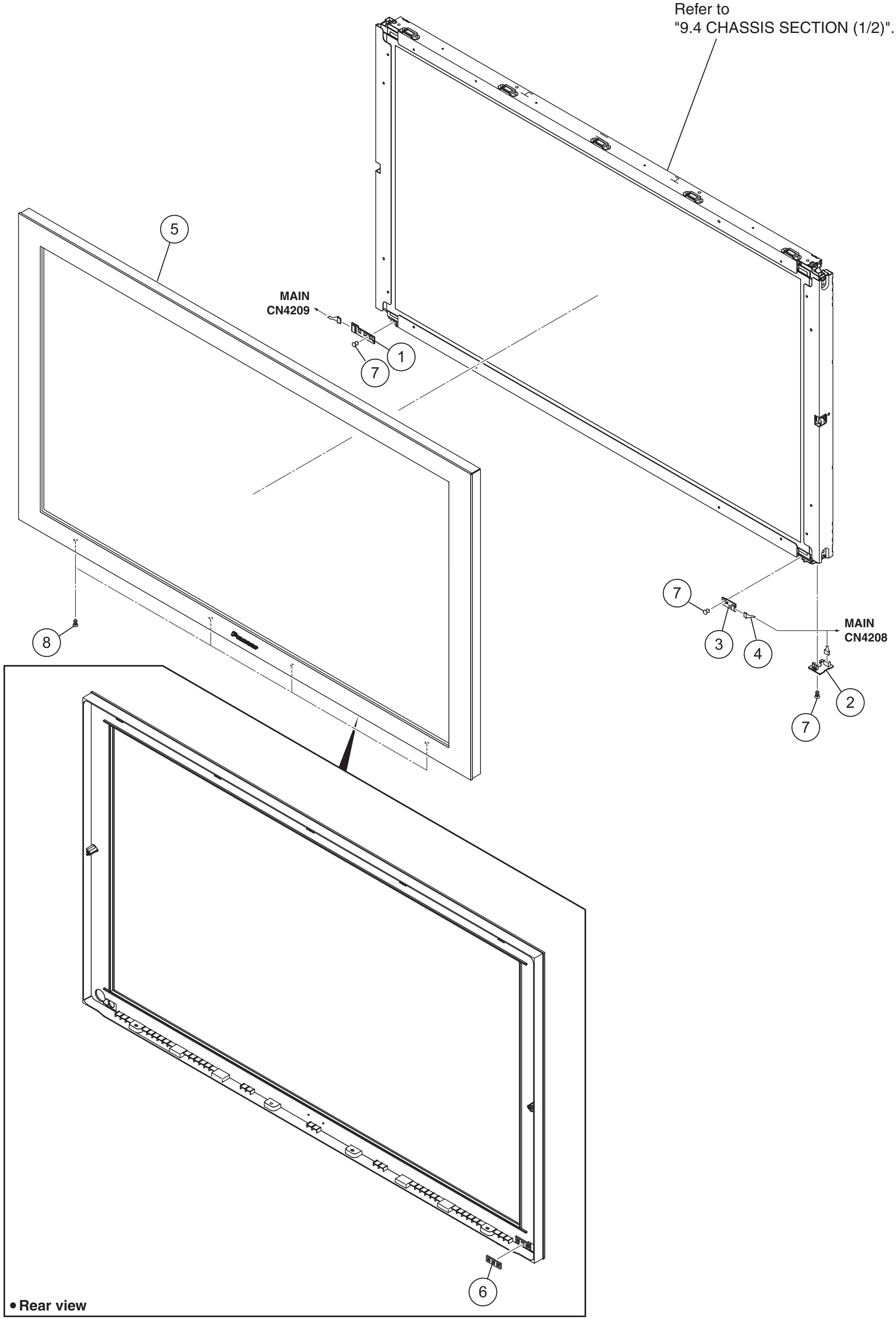
Mark	No.	Description	Part No.
	21	Side Input Cover	AMR3754
	22	Operation Button	AAC1569
	23	Power Button (508F)	AAD4152
	24	Rear Case (509)	ANE1671
	25	Under Cover (509)	ANE1672
NSP	26	Name Label (LX5090)	See Contrast table (2)
	27	Serial Sheet	AAX3143
	28	Label A (ES)	AAX3568
	29	Side Label (EU)	AAK2932
	30	•••••	
	31	•••••	
	32	Screw (M3 x 6)	ABA1377
	33	Screw (M3 x 10)	ABA1378
	34	Screw (3 x 8 P)	ABA1379
	35	Screw (3 x 25 P)	ABA1380
	36	Screw	AMZ30P060FTB
	37	Screw	AMZ30P080FTB
	38	Screw	APZ30P080FTB
	39	Screw	BMZ30P080FTB
	40	Screw	BPZ30P080FTB

(2) CONTRAST TABLE

PDP-LX5090/WYSIXK5 and WYS5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-LX5090 /WYSIXK5	PDP-LX5090 /WYS5
	17	Inner Grip Assy	AMR3693	AMR3434
NSP	26	Name Label (LX5090)	AAL3033	AAL3035

9.3 FRONT SECTION


Refer to
"9.4 CHASSIS SECTION (1/2)".
5
MAIN
CN4209
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MAIN
CN4208
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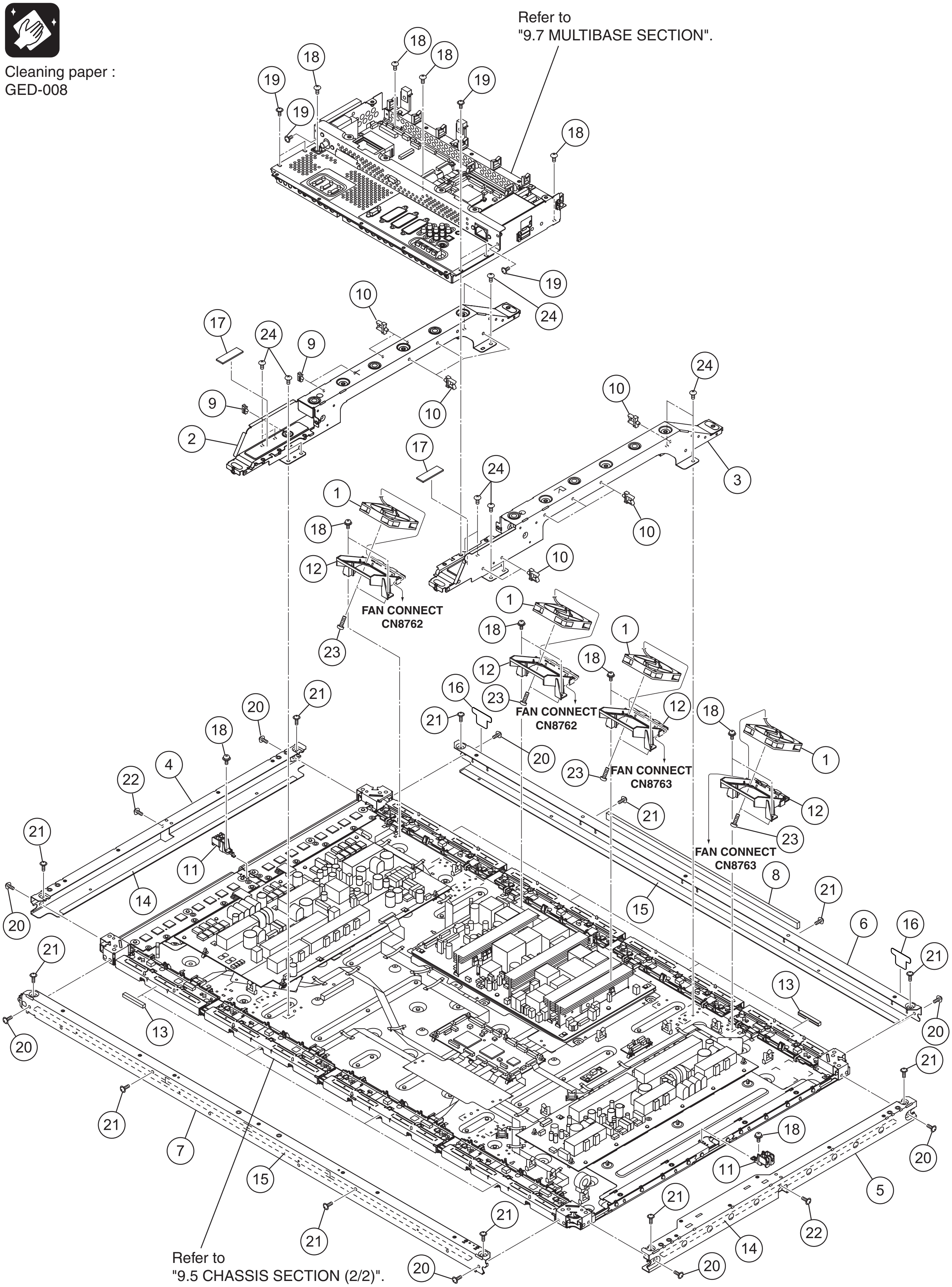
8
6
• Rear view

FRONT SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	LED Assy	AWW1362
	2	IR Assy	AWW1363
	3	RLS Assy	AWW1365
	4	7/3/3P Housing Wire (J117)	ADX3643
	5	Front Bezel (509TVE)	AMB3087
	6	Blind Cushion (508F)	AEB1479
	7	Nylon Rivet	AEC1671
	8	Rivet (Plastic)	AEC1877

9.4 CHASSIS SECTION (1/2)

Cleaning paper :
GED-008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FAN CONNECT
CN8762
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FAN CONNECT
CN8762
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FAN CONNECT
CN8763
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CN8763
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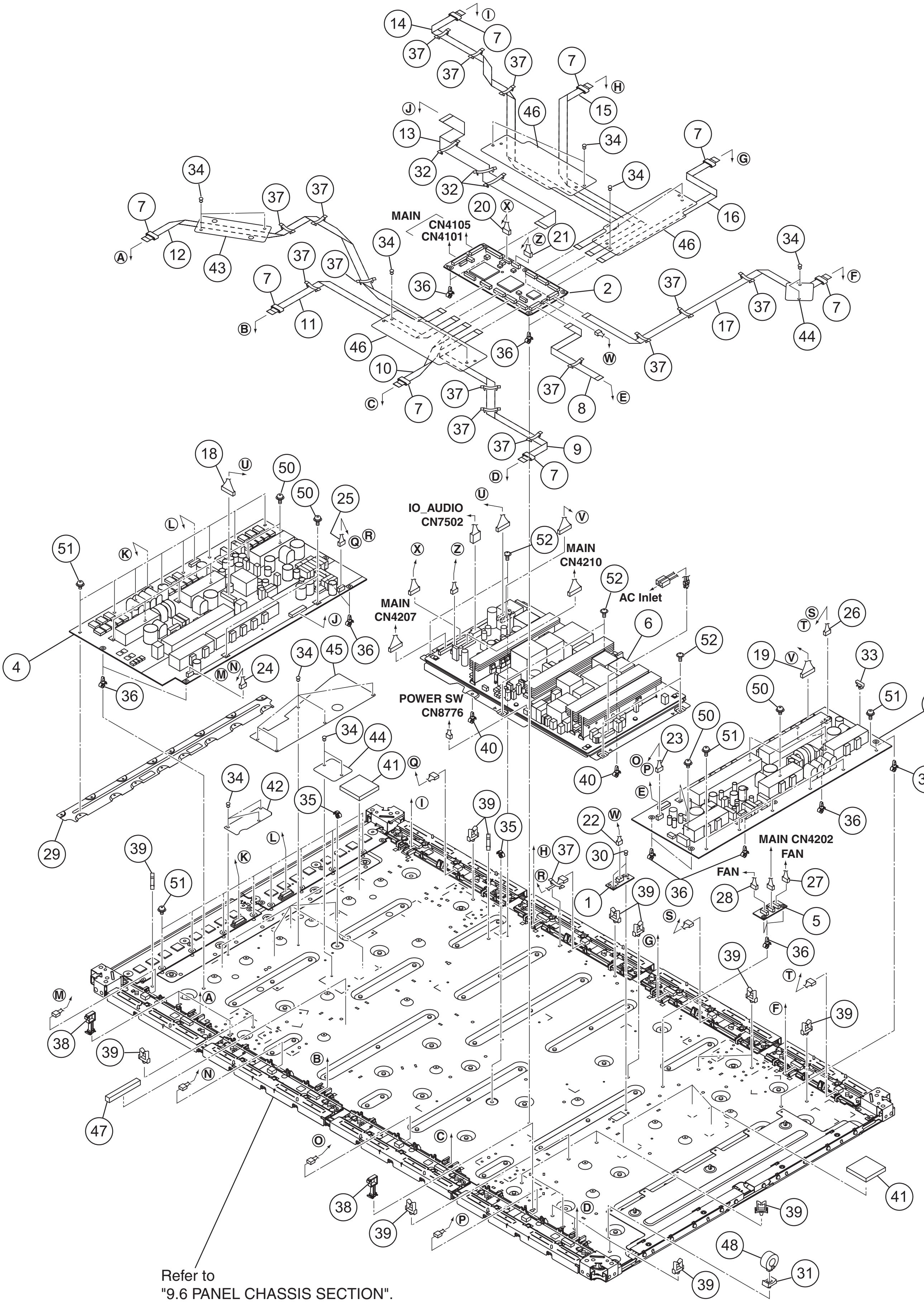
Refer to
"9.7 MULTIBASE SECTION".

Refer to
"9.5 CHASSIS SECTION (2/2)".

CHASSIS SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.
⚠	1	DC FAN Motor 80 x 15L	AXM1065
	2	Sub Frame L Assy (50)	ANA2137
	3	Sub Frame R Assy (50)	ANA2140
⚠	4	F. Chassis VL Assy 50	ANA2142
⚠	5	F. Chassis VR Assy 50	ANA2151
⚠	6	F. Chassis HT Assy 50	ANA2144
⚠	7	F. Chassis HB 50	ANA2188
	8	Waterproof Cushion	AEB1495
	9	Wire Clip	AEC1948
	10	Reuse Wire Saddle	AEC2134
	11	Support Bracket	AMR3762
	12	FAN Bracket 80	AMR3787
⚠	13	Gasket ADH-FCH	ANK1850
⚠	14	Front Gasket V50	ANK1963
⚠	15	Front Gasket H50	ANK1964
	16	FC Gate Sheet	AMR3906
	17	Stand Cushion	AED1340
	18	Screw	ABA1351
	19	Screw (M3 x 6)	ABA1377
	20	Screw	ABZ30P080FTC
	21	Screw	AMZ30P060FTB
	22	Screw	APZ30P080FTB
	23	Screw	PPZ50P100FTB
	24	Screw	TBZ40P060FTC

9.5 CHASSIS SECTION (2/2)


MAIN
CN4105
CN4101
IO_AUDIO
CN7502
MAIN
CN4210
AC Inlet
MAIN
CN4207
POWER SW
CN8776
MAIN CN4202
FAN
FAN
Refer to
"9.6 PANEL CHASSIS SECTION".
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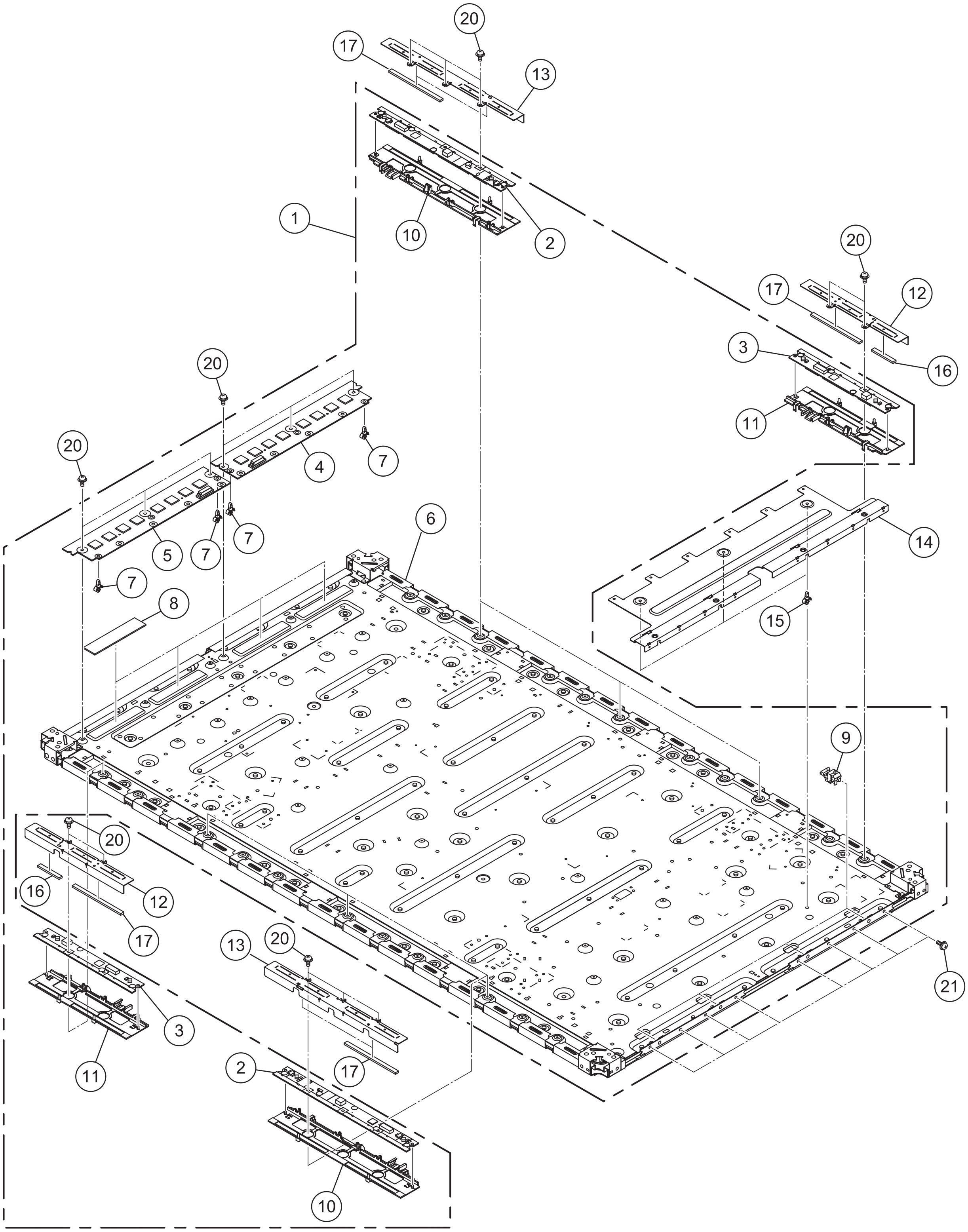
CHASSIS SECTION (2/2) PARTS LIST

Mark	No.	Description	Part No.
	1	SENSOR Assy	AWW1340
	2	50F DIGITAL Assy	AWW1347
	3	50F X DRIVE Assy	AWV2546
	4	50F Y DRIVE Assy	AWV2547
	5	FAN CONNECT Assy	AWW1364
⚠	6	POWER SUPPLY Unit	AXY1200
⚠	7	Ferrite Core (F1 - F8)	ATX1072
	8	Flexible Cable (J201)	ADD1540
	9	Flexible Cable (J202)	ADD1541
	10	Flexible Cable (J203)	ADD1542
	11	Flexible Cable (J204)	ADD1543
	12	Flexible Cable (J205)	ADD1544
	13	Flexible Cable (J206)	ADD1545
	14	Flexible Cable (J207)	ADD1546
	15	Flexible Cable (J208)	ADD1547
	16	Flexible Cable (J209)	ADD1548
	17	Flexible Cable (J210)	ADD1549
	18	12P/11P Housing Wire (J101)	ADX3628
	19	11P Housing Wire (J102)	ADX3629
	20	10P Housing Wire (J106)	ADX3632
	21	6P Housing Wire (J107)	ADX3633
	22	5P Housing Wire (J108)	ADX3634
	23	5/3/3P Housing Wire (J112)	ADX3638
	24	5/3/3P Housing Wire (J113)	ADX3639
	25	5/3/3P Housing Wire (J114)	ADX3640
	26	5/3/3P Housing Wire (J115)	ADX3641
	27	6/3/3P Housing Wire (J120)	ADX3646
	28	7/3/3P Housing Wire (J121)	ADX3647
	29	Plate Y (509)	ANG3127
	30	Nylon Rivet	AEC1671
	31	Ferrite Core Holder	AEC1818
	32	Flat Clamp	AEC1879
	33	Wire Clip	AEC1948
	34	Nylon Rivet	AEC2089
	35	Reuse Card Spacer	AEC2117
	36	PCB Spacer (Reuse)	AEC2122
	37	Flat Clamp	AEC2132
	38	Reuse Fastener	AEC2133
	39	Reuse Wire Saddle	AEC2134
	40	Reuse PCB Spacer 4.5	AEC2148
	41	Drive Sheet	AEH1155
	42	Y Drive Sheet B	AMR3769
	43	Y Drive Sheet C	AMR3783
	44	FAN Sheet	AMR3786
	45	Y Drive Sheet A (M)	AMR3881
	46	FFC Sheet	AMR3893
⚠	47	Gasket (10 x 10 x 80)	ANK1974
⚠	48	Ferrite Core (L1)	ATX1044
	49	• • • • •	
	50	Screw	ABA1351
	51	Screw	ABA1364
	52	Screw	ABZ30P060FTB

9.6 PANEL CHASSIS SECTION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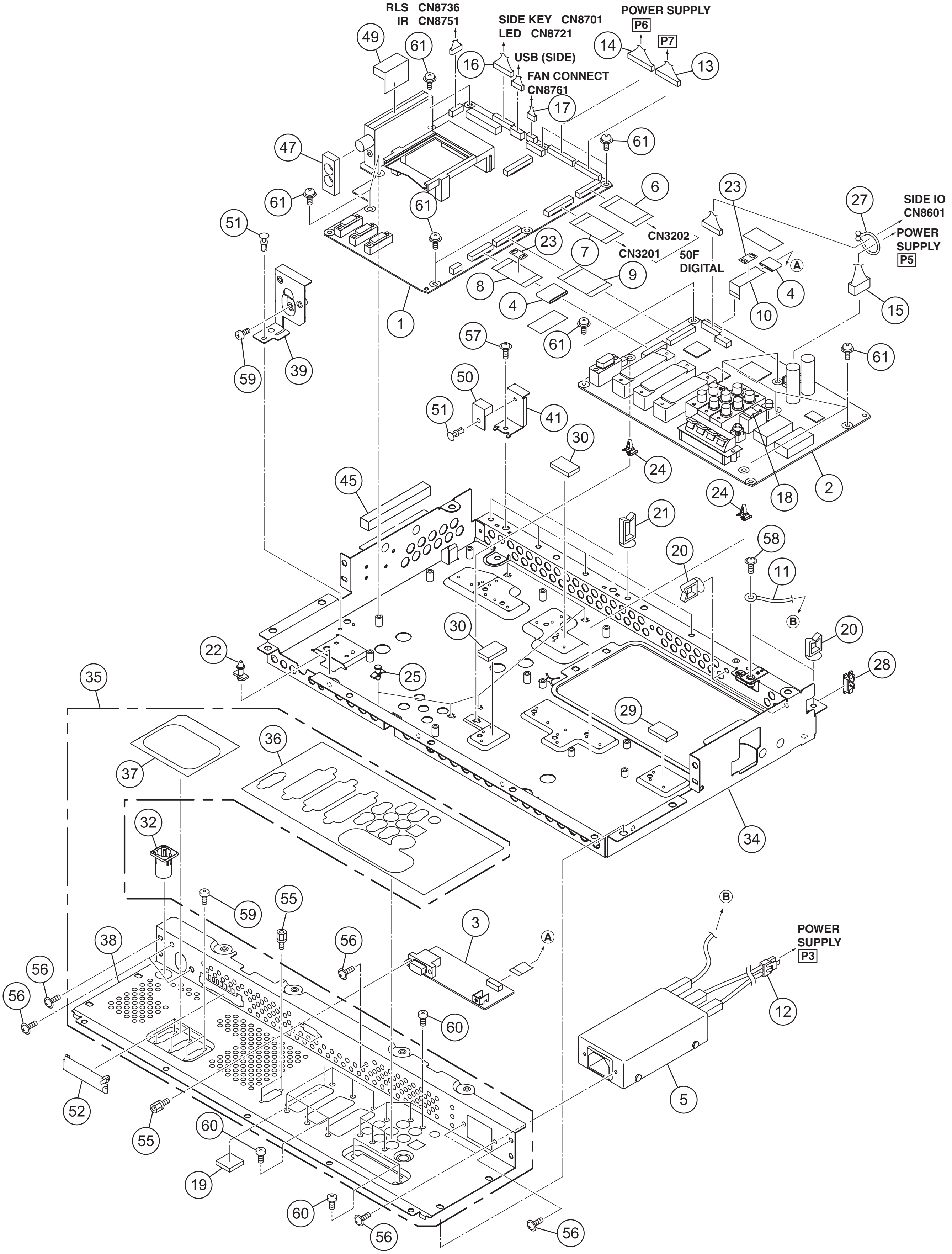
PANEL CHASSIS SECTION PARTS LIST

Mark	No.	Description	Part No.
NSP	1	P. Chassis (509FE) Assy	AWU1297
NSP	2	50F ADDRESS L Assy	AWW1348
NSP	3	50F ADDRESS S Assy	AWW1349
NSP	4	50F SCAN A Assy	AWW1350
NSP	5	50F SCAN B Assy	AWW1351
NSP	6	P. Panel (50FE) Assy	AWU1298
	7	Reuse PCB Spacer 4.5	AEC2148
	8	Heat Radiation Sheet	AEH1134
	9	Plate Holder	AMR3757
	10	Holder L Assy (509)	AMR3775
	11	Holder S Assy (509)	AMR3776
	12	Address Plate S (509)	ANG3129
	13	Address Plate L (509)	ANG3130
	14	Plate X (509)	ANG3128
	15	PCB Spacer (Reuse)	AEC2122
	16	Address Silicon TS	AEH1160
	17	Address Silicon TL	AEH1161
	18	• • • • •	
	19	• • • • •	
	20	Screw	ABA1351
	21	Screw	ABA1364

9.7 MULTIBASE SECTION


RLS CN8736
IR CN8751
SIDE KEY CN8701
LED CN8721
USB (SIDE)
FAN CONNECT
CN8761
POWER SUPPLY
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CN8601
POWER
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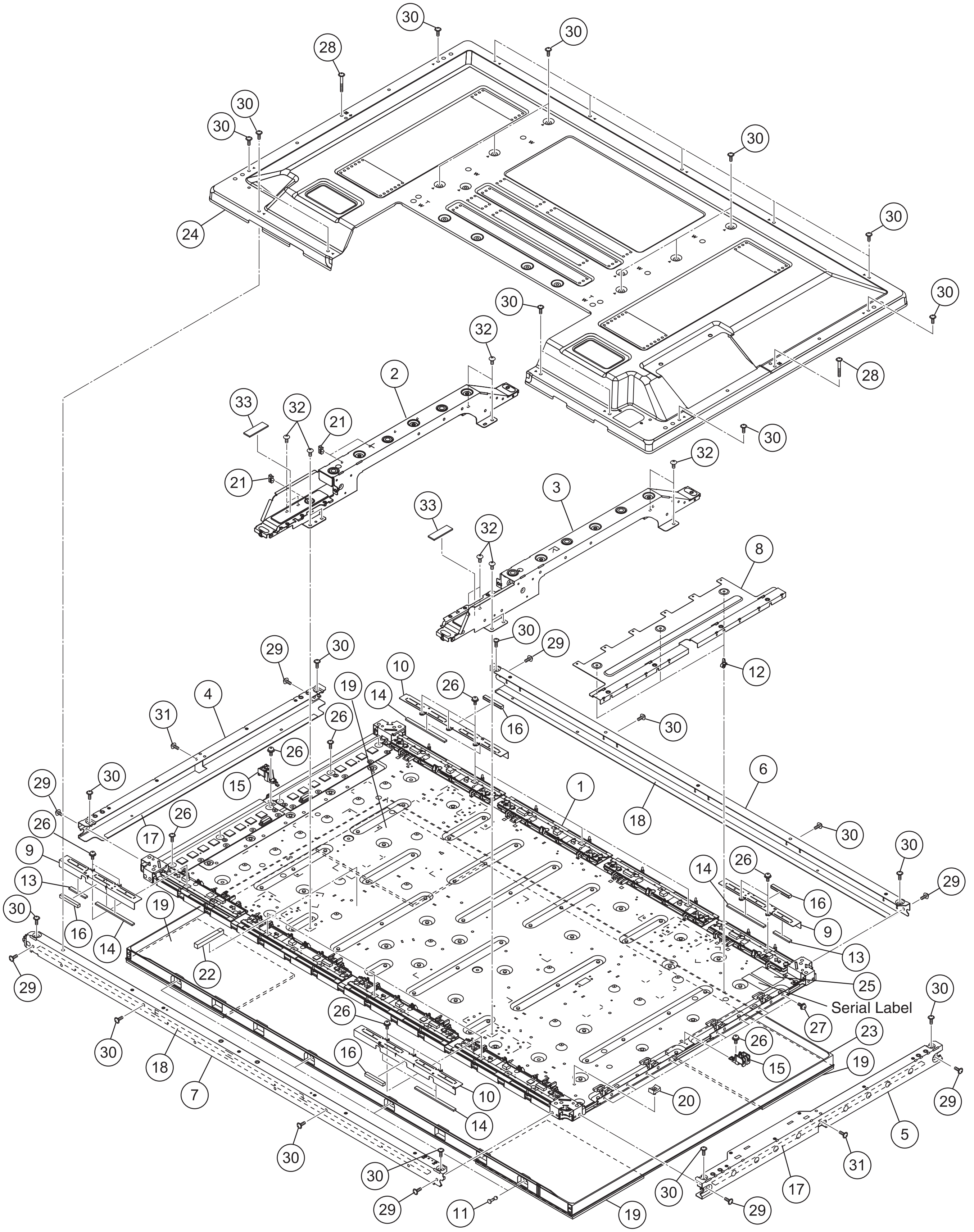
MULTIBASE SECTION PARTS LIST

Mark	No.	Description	Part No.
⚠	1	MAIN Assy	AWV2555
	2	IO_AUDIO Assy	AWW1354
	3	PC Assy	AWW1359
⚠	4	Ferrite Core (F11, F12)	ATX1048
⚠	5	AC Inlet (CN1)	AKP1336
	6	Flexible Cable (J211)	ADD1533
	7	Flexible Cable (J212)	ADD1534
	8	Flexible Cable (J213)	ADD1535
	9	Flexible Cable (J214)	ADD1536
	10	Flexible Cable (J215)	ADD1537
⚠	11	Housing Wire (J105)	ADX3608
⚠	12	Housing Wire (J104)	ADX3631
	13	14P Housing Wire (J109)	ADX3635
	14	15P Housing Wire (J110)	ADX3636
	15	5P Housing Wire (J111)	ADX3637
	16	10/6/4P Housing Wire (J116)	ADX3642
	17	4P Housing Wire (J119)	ADX3645
	18	Rubber Sheet	AEB1498
	19	Cushion	AEB1499
	20	Wire Saddle	AEC1745
	21	Wire Saddle	AEC1797
	22	Circuit Board Spacer	AEC1872
	23	Ferrite Stopper	AEC1981
	24	Reuse PCB Spacer 4.5	AEC2136 or AEC2161
	25	PCB Spacer	AEC2146
	26	• • • • •	
	27	Clamp	AEC2156
	28	Edge Holder	AEC2159
	29	Silicon Sheet MTB A	AEH1174
	30	Silicon Sheet MTB B	AEH1175
	31	• • • • •	
	32	Sleeve	AMR3771
	33	• • • • •	
	34	MTB Assy	ANA2150
	35	1..T Panel ES Assy	ANC2470
	36	2..Label B1 (ES)	AAX3573
	37	2..Label B2 (ES)	AAX3584
	38	2..Terminal Panel (ES)	ANC2465
	39	Tuner Panel (ES)	ANG3161
	40	• • • • •	
	41	Earth BKT A	ANG3182
	42	• • • • •	
	43	• • • • •	
	44	• • • • •	
⚠	45	Gasket (10 x 10 x 80)	ANK1974
	46	• • • • •	
⚠	47	Gasket (E)	ANK1981
	48	• • • • •	
⚠	49	Gasket (ES)	ANK1978
⚠	50	Gasket (10 x 8 x 15)	ANK1982
	51	Nylon Rivet	AEC1671
	52	Card Lid	AMR3772
	53	• • • • •	
	54	• • • • •	
	55	Hexagon Headed Screw	ABA1382
	56	Screw (M3 x 6)	ABA1377
	57	Screw	AMZ30P060FTB
	58	Screw	BMP40P080FSN
	59	Screw	BMZ30P060FTB
	60	Screw	BPZ30P080FTB
	61	Screw	PMB30P060FNI

9.8 PDP SERVICE ASSY

PDP SERVICE ASSY 509FE : AWU1342

● Exterior Section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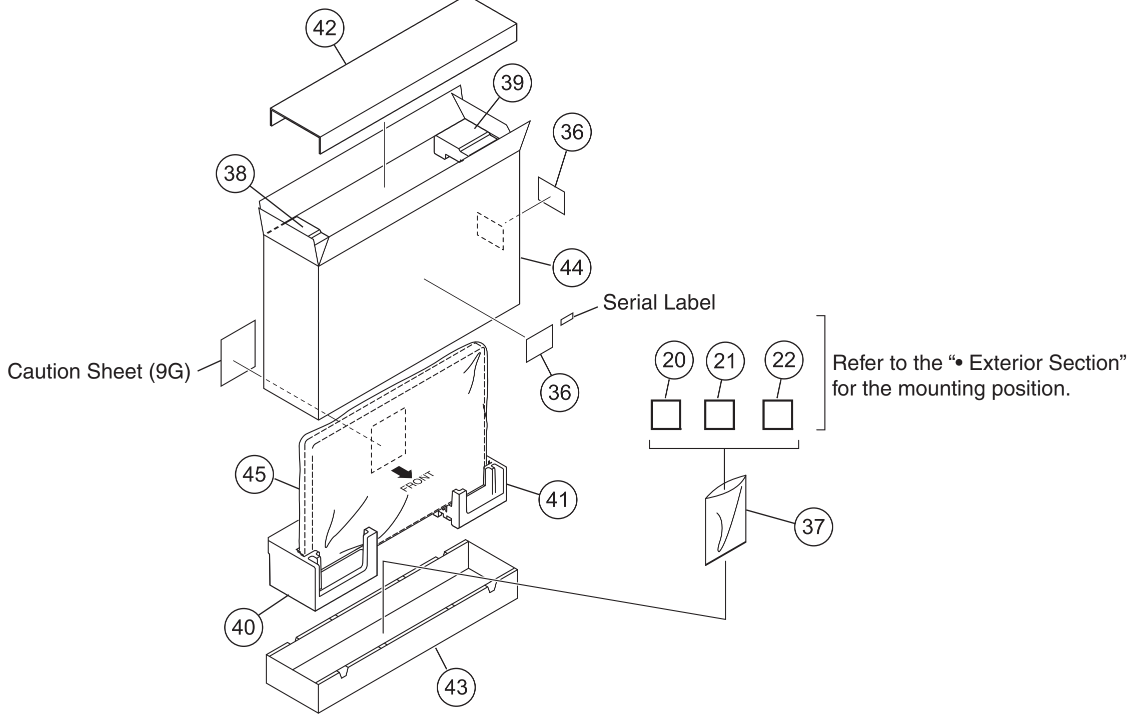
● Packing Section



Refer to the "• Exterior Section" for the mounting position.

PDP SERVICE ASSY PARTS LIST

Mark	No.	Description	Part No.
NSP	1	P. Chassis (509FE) Assy	AWU1297
	2	Sub Frame L Assy (50)	ANA2137
	3	Sub Frame R Assy (50)	ANA2140
	4	F. Chassis VL Assy 50	ANA2142
	5	F. Chassis VR Assy 50	ANA2151
	6	F. Chassis HT Assy 50	ANA2144
	7	F. Chassis HB 50	ANA2188
	8	Plate X (509)	ANG3128
	9	Address Plate S (509)	ANG3129
	10	Address Plate L (509)	ANG3130
	11	Rivet (Plastic)	AEC1877
	12	PCB Spacer (Reuse)	AEC2122
	13	Address Silicon TS	AEH1160
	14	Address Silicon TL	AEH1161
	15	Support Bracket	AMR3762
	16	Gasket ADH-FCH	ANK1850
	17	Front Gasket V50	ANK1963
	18	Front Gasket H50	ANK1964
	19	Service Pad	AEC2105
	20	Ferrite Core Holder	AEC1818
	21	Wire Clip	AEC1948
	22	Gasket (10 x 10 x 80)	ANK1974
NSP	23	Front Service Assy (509)	AMB3103
	24	Rear Case (509)	ANE1671
NSP	25	Drive Voltage Label	ARW1097
	26	Screw	ABA1351
	27	Screw	ABA1364
	28	Screw (3 x 25 P)	ABA1380
	29	Screw	ABZ30P080FTC
	30	Screw	AMZ30P060FTB
	31	Screw	APZ30P080FTB
	32	Screw	TBZ40P060FTC
	33	Stand Cushion	AED1340
	34	• • • • •	
	35	• • • • •	
	36	Caution Label	AAX3031
	37	Vinyl Bag	AHG1338
	38	Pad (509 T-L EU)	AHA2727
	39	Pad (509 T-R EU)	AHA2728
	40	Pad (509 B-L EU)	AHA2729
	41	Pad (509 B-R EU)	AHA2730
	42	Carton Board (509)	AHB1303
	43	Under Carton (5090)	AHD3673
	44	Upper Carton (509F-SV)	AHD3716
	45	Protect Sheet	AHG1331